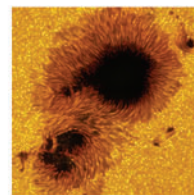
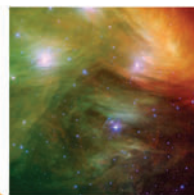
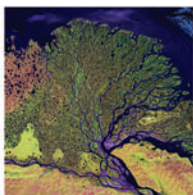




Science Mission Directorate

Education and Public Outreach 2005 Annual Report



ABOUT THE COVER

The 2005 Science Mission Directorate Education and Public Outreach events included opportunities for personal engagement, represented by Southern University students observing the Sun (third image from the left) and elementary school students engaged in a GLOBE activity called Colors of the Seasons (fourth image from the left).

The leftmost image shows a mosaic of Jupiter's Great Red Spot. It was obtained by Voyager 2 when the spacecraft was 2.6 million kilometers from Jupiter.

The second image is of the Lena Delta. The Lena River, some 2,800 miles (4,400 kilometers) long, is one of the largest rivers in the world. The Lena Delta Reserve is the most extensive protected wilderness area in Russia. It is an important refuge and breeding ground for many species of Siberian wildlife. The Lena Delta can be found on Landsat 7 WRS Path 131, Row 8/9, center: 72.21, 126.15. This image was taken on 7/27/2000.

The fifth image from the left is the Seven Sisters, also known as the Pleiades star cluster. This image was taken by NASA's Spitzer Space Telescope. It is composed of data taken by the Multiband Imaging Photometer for Spitzer (MIPS) and the Spitzer Infrared Array Camera (IRAC).

In the sixth image from the left, we see the sunspots as observed in the photospheric layer of the solar atmosphere as observed by SOLAR-B, now called Hinode. This image in G-band at 430 nanometers shows us the solar surface in the photosphere with unprecedented clarity. A collaboration between the space agencies of Japan, the United States, the United Kingdom, and Europe, Hinode is a mission to investigate the interaction between the Sun's magnetic field and its corona.

The seventh image from the left shows Hurricane Katrina as it approaches the Louisiana coast.

Credits

Insets (from left to right): NASA/JPL; Courtesy of USGS National Center for EROS and NASA Landsat Project Science Office; Southern University/G. Stacy; Courtesy of the GLOBE Program; NASA/JPL-Caltech/J. Stauffer (SSC/Caltech); Hinode JAXA/NASA; NASA/MODIS Land Rapid Response Team/Jeff Schmaltz. CD cover illustration and design: NASA/Jenny Mottar.

DEAR COLLEAGUES:

In Federal fiscal year (FY) 2005, NASA's Science Mission Directorate (SMD) Education and Public Outreach (E/PO) program was characterized by continued rapid growth, attention to establishing processes for addressing the critical areas of coherence in Earth and space science educational materials, student and teacher collaboration programs, professional development for specialists in Earth and space science E/PO, diversity in Earth and space science education and research programs, and increased collaborations with other parts of NASA's overall education program.

In lieu of the Annual Report book, please find enclosed a CD containing the SMD E/PO Annual Report for the year 2005. The report documents the many Earth and space science activities, products, and events sponsored by the NASA Science Mission Directorate during FY 2005. They cover a diverse array of programs and resources for higher education, formal classroom instruction, informal education, and professional and workforce development. They include exhibitions and planetarium shows at science centers and museums across the country, activities involving students directly in the research and discoveries of NASA's Earth and space science missions, teacher workshops, and a wide variety of public outreach events. More than 1,000 SMD-affiliated scientists, technologists, and support personnel contributed to the development of E/PO products and to the efforts that included events in all 50 States, the District of Columbia, and Puerto Rico. The complete FY 2005 listing of Earth and space science education programs, products, and resources, along with NASA-wide resources for educators, is provided in this CD and online at <http://SMD-EPO.hq.nasa.gov/AR.htm>.

Significant progress was made in 2005, and the future promises to bring the Science Mission Directorate E/PO program to even higher levels of maturity, effectiveness, and accomplishment, as well as to continue NASA's tradition of investing in the Nation's education programs in order to inspire, engage, educate, and employ the next generation of NASA scientists and engineers.

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INTRODUCTION

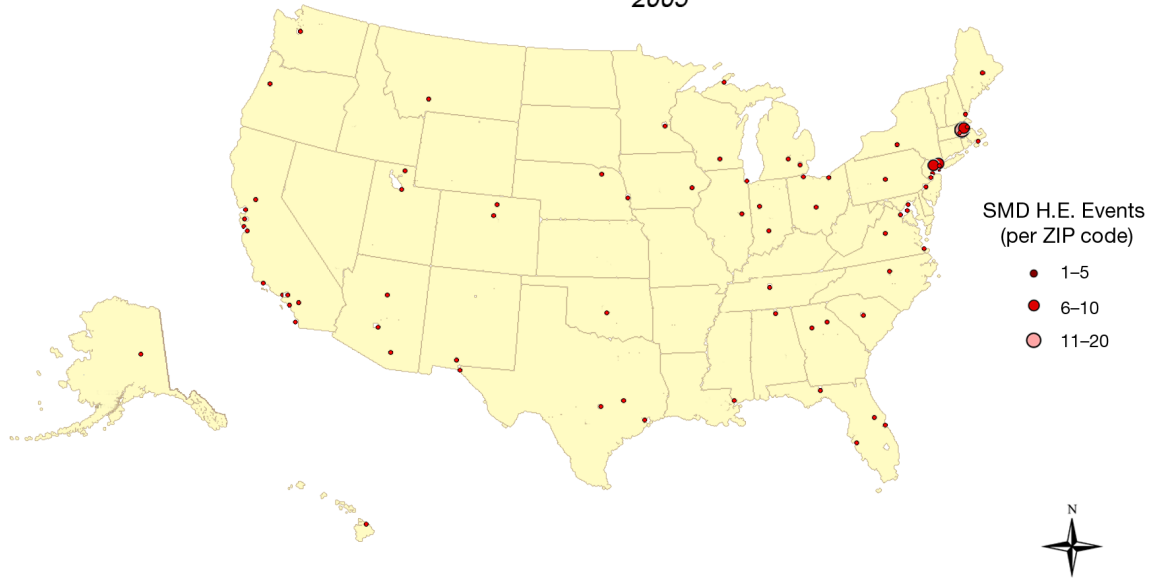
In Federal fiscal year (FY) 2005, NASA's Science Mission Directorate (SMD) Education and Public Outreach (E/PO) program was characterized by continued rapid growth, attention to establishing processes for addressing the critical areas of coherence in Earth and space science educational materials, student and teacher collaboration programs, professional development for specialists in Earth and space science E/PO, diversity in Earth and space science education and research programs, and increased collaborations with other parts of NASA's overall education program.

The report documents the award-winning Earth and space science activities, products, and events sponsored by the NASA Science Mission Directorate during FY 2005. They cover a diverse array of programs and resources for higher education, formal classroom instruction, informal education, and professional and workforce development. They include exhibitions and planetarium shows at science centers and museums across the country, activities involving students directly in the research and discoveries of NASA's Earth and space science missions, teacher workshops, and a wide variety of public outreach events. More than 1,000 SMD-affiliated scientists, technologists, and support personnel contributed to the development of E/PO products and to the efforts that included events in all 50 States, the District of Columbia, and Puerto Rico.

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SMD HIGHER EDUCATION EVENTS

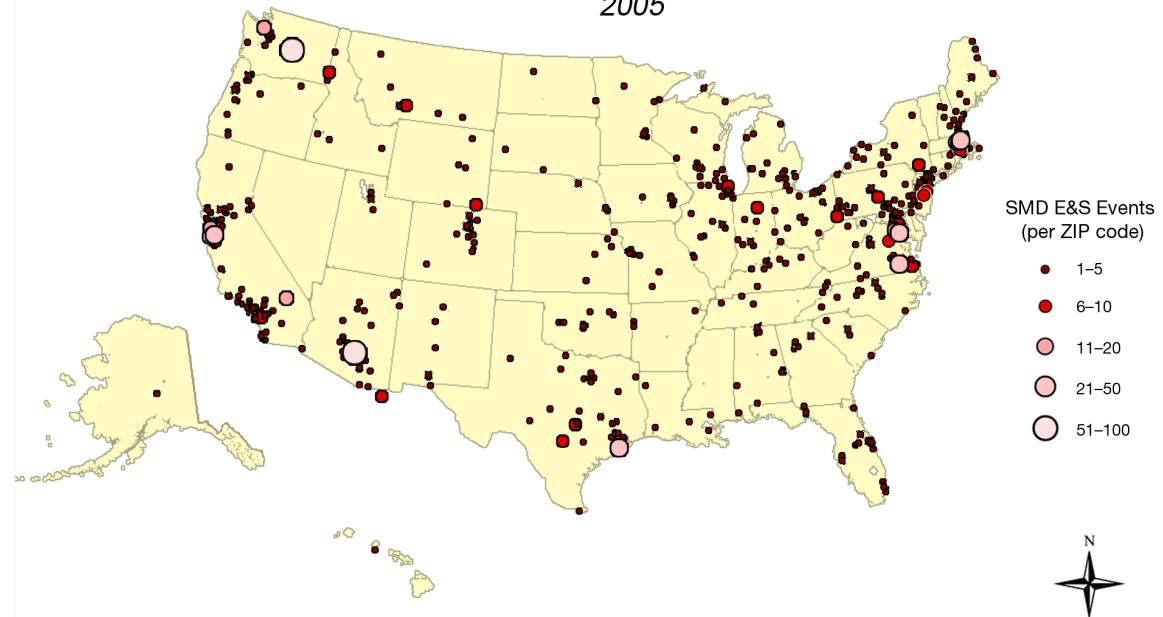
2005



Over 300 higher education events were hosted at 257 sites across the country. (Image credit: Kathy Cunningham)

SMD ELEMENTARY & SECONDARY EDUCATION EVENTS

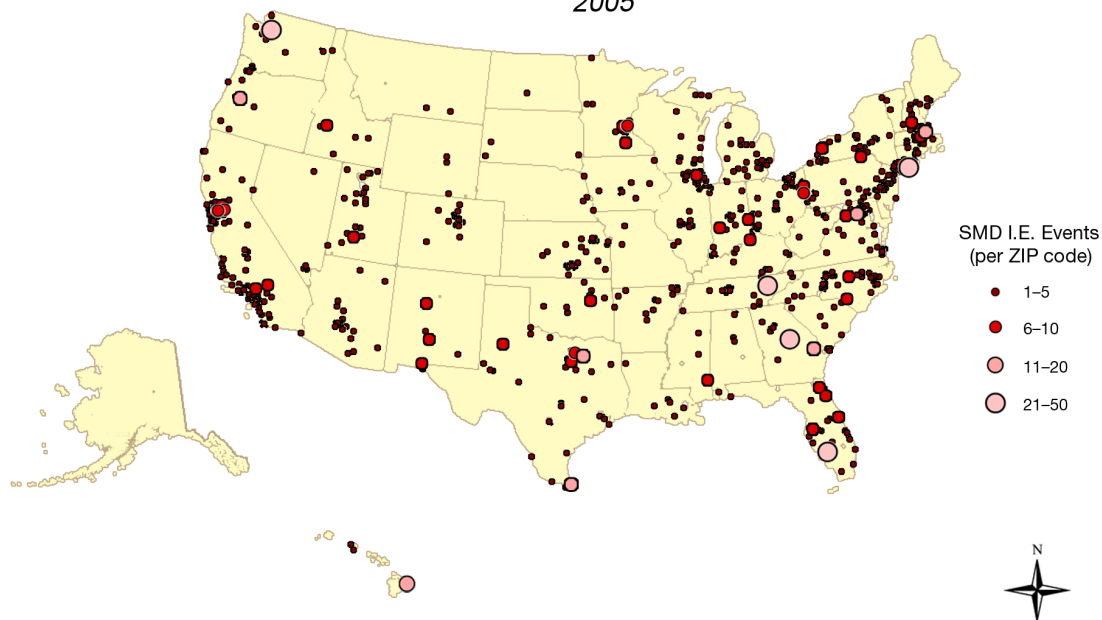
2005



Over 1,600 elementary and secondary education events were hosted at 802 sites across the country. (Image credit: Kathy Cunningham)

SMD INFORMAL EDUCATION EVENTS

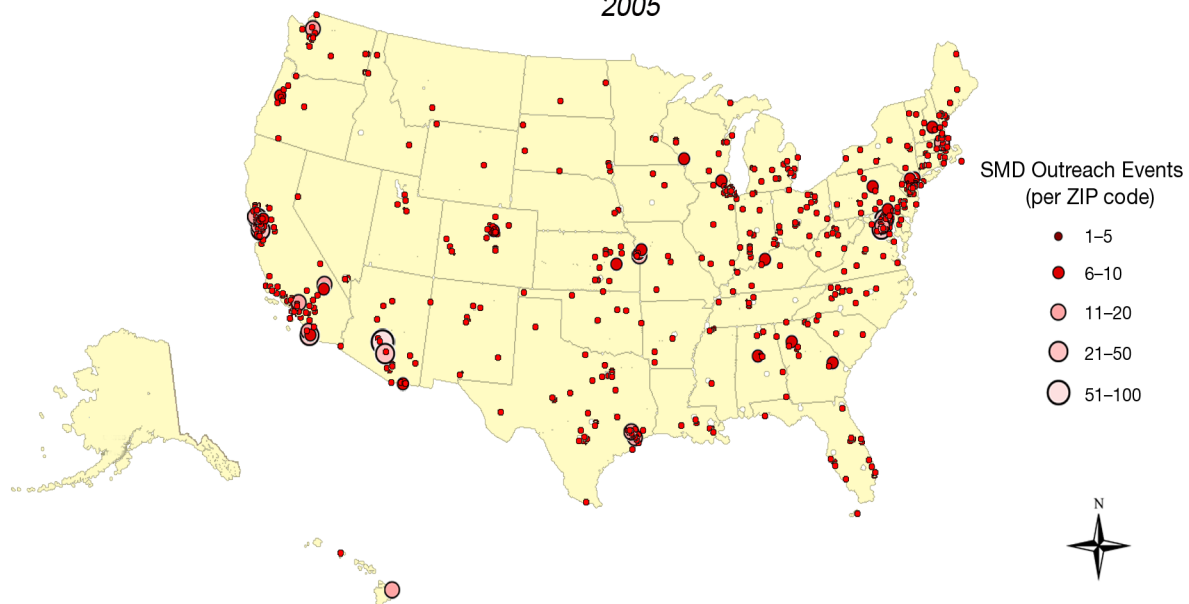
2005



Over 3,000 informal education events were hosted at 1,738 sites across the country. (Image credit: Kathy Cunningham)

SMD OUTREACH EVENTS

2005



Over 1,100 outreach education events were hosted at nearly 500 sites across the country. (Image credit: Kathy Cunningham)

APPENDIX A. Directory of Education and Public Outreach Products and Activities

This directory provides detailed information on each of the Science Mission Directorate Education and Public Outreach (E/PO) program products and activities produced or carried out in FY 2005. (A list of mission/program acronyms is provided in appendix I.) The listings are grouped into categories as follows, according to the type of E/PO product or activity that they represent.

Higher Education:

- **Faculty and Research Support:** Provides NASA competency-building education and research opportunities for faculty, researchers, and postdoctoral fellows.
- **Higher Education Student Support:** Provides NASA competency-building education and research opportunities to individuals to develop qualified undergraduate and graduate students who are prepared for employment in STEM disciplines at NASA, industry, and higher education.
- **Higher Education Course Development:** Develops NASA-related course resources for integration into STEM disciplines.
- **Targeted Institution Research and Academic Infrastructure:** Improves the ability of targeted institutions to compete for NASA research and development work. Examples include the following:
 - **Minority Institution Initiative in Space Science:** Projects that are part of the Minority University Education and Research Partnership Initiative in Space Science.
 - **University Research Centers:** Projects that are part of the Office of Education University Research Centers Program and have significant involvement with SMD activities.
 - **Other Targeted Activities:** Projects that provide substantial targeted outreach to underserved/underutilized groups at the postsecondary education level.

Elementary and Secondary Education:

- **Educator Professional Development/Short Duration:** Provides short-duration professional development and training opportunities to educators, equipping them with the skills and knowledge to attract and retain students in STEM disciplines.
- **Educator Professional Development/Long Duration:** Provides long-duration and/or sustained professional development training opportunities to educators that result in deeper content understanding and/or competence and confidence in teaching STEM disciplines.
- **Curricular Support Resources:** Provides curricular support resources that use NASA themes and content to (a) enhance student skills and proficiency in STEM disciplines, (b) inform students about STEM career opportunities, and (c) communicate information about NASA's mission activities.
- **Student Involvement:** Provides K–12 students with authentic firsthand opportunities to participate in NASA mission activities, thus inspiring interest in STEM disciplines and careers and providing opportunities for family involvement in K–12 student learning in STEM areas.

Informal Education:

- **Informal Education Resources:** Provides informal education resources that use NASA themes and content to (1) enhance participant skills and proficiency in STEM disciplines, (2) inform participants about STEM career opportunities, and (3) communicate information about NASA's mission activities. Develops a significant pool of qualified presenters of NASA aerospace content who interact with a large number of participants. Examples include the following:
 - Planetarium shows developed or produced with direct SMD mission/program involvement.
 - Exhibits developed with direct SMD mission/program involvement and installed in a science center or museum.
 - Materials or content supplied by SMD missions/programs for use as components of planetarium shows or museum exhibits.
- **Professional Development for Informal Education Providers:** Provides opportunities to improve the competency and qualifications of STEM informal educators, enabling informal educators to communicate information effectively and accurately about NASA activities and access NASA data for programs and exhibits.
- **Informal Education Provider Involvement Opportunities:** Develops a national pool of qualified informal educators with experience in NASA mission and related activities. Engages informal educators using NASA themes to enable them to (1) enhance participant skills and proficiency in STEM disciplines, (2) inform participants about STEM career opportunities, and (3) communicate information about NASA's mission activities. Establishes and maintains a single informal education network for accessing NASA materials that has the flexibility for special interest groups to function as a subset of the larger network.

Outreach:

- **Public Presentations:** Presentations that primarily target improving the general public's understanding of science and technology.
- **Outreach Resources:** Materials that primarily target improving the general public's understanding of science and technology through exhibits and displays at conferences and other venues or that use print, television, Internet, and/or video.

- **Scientist Involvement:** Activities that target the scientist to encourage his or her participation in E/PO activities. Examples include activities that highlight scientist contributions to E/PO and training in E/PO best practices.

Each listing contains some or all of the following detailed information:

Title:

Title of the product or activity.

Theme(s):

NASA SMD Theme(s) on which the product or activity is focused:

Astrophysics
Earth Science
Heliophysics
Planetary Science

Subject(s):

Subject area(s) that an E/PO product addresses (e.g., physical science, Earth science, space science).

Format(s):

Format in which an E/PO product is produced (e.g., CD, pamphlet, Web site).

Audience:

Target audience for an E/PO product (e.g., grades K–12, general public).

Mission(s)/Program(s):

NASA SMD mission(s) and/or program(s) that contributed to producing the product or conducting the activity. Further information on the overall E/PO activities of each mission or program can be found in appendix B. A listing of all missions and programs according to their acronyms, along with references to where they appear in this report, can be found in appendix I.

Description:

Narrative description of the product or activity.

Lead:

Person or organization with lead responsibility for the product or activity.

Contact:

Person or organization with contact responsibility for the product or activity.

Primary URL:

Primary Web address for further information on the product or activity.

Secondary URL:

Secondary Web address for further information on the product or activity.

Scientist(s):

Science Mission Directorate (SMD)-affiliated scientists who participated in developing the product or conducting the activity.

Partner(s):

Institutions or organizations that are partners or collaborators in the product or activity.

Event(s):

Dates, location, and numbers of participants for each discrete event associated with an E/PO activity. For example, if the activity is a program of teacher workshops, then each individual workshop is an event. The numbers of participants are counted in three separate categories: direct participants (those whose name, school, or organization is known and who have interactions with the activity leader), anonymous participants (those whose name, school, or organization is not known or who do not have interactions with the activity leader), and Web audiences.

HIGHER EDUCATION

Faculty and Research Support

A1. Chandra X-ray Center: Postdoctoral Fellowship Program

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: The Chandra X-ray Observatory (CXO) postdoctoral fellowship program awards fellowships to recent Ph.D.'s in astronomy, physics, and related disciplines. Chandra Fellows hold their appointments at a host institution in the U.S. for research that is broadly related to the goals of the Chandra satellite. This research can include new Chandra observations and archival analysis as well as related theoretical and observational studies of x-ray

sources at all wavelengths. However, the main criterion for proposal review is the contribution to the understanding of x-ray sources, and this may be specifically appraised for continuation of the fellowship after the second year. The fellowship duration is 3 years. Listed below are the institutions hosting fellows in 2005, the number of fellows, and their advisers.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

Primary URL: <http://cxc.harvard.edu/fellows/>

Scientist(s):	Dr. Mitchell Begelman	University of Colorado, Boulder	Boulder, CO
	Dr. Omer Blaes	University of California, Santa Barbara	Santa Barbara, CA
	Dr. Roger Blandford	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Alex Filippenko	University of California, Berkeley	Berkeley, CA
	Dr. Peter Goldreich	Institute for Advanced Study	Princeton, NJ
	Dr. David Helfand	Columbia University	New York, NY
	Dr. Christine Jones	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Sumner Starrfield	Arizona State University	Tempe, AZ
	Dr. Dennis Zaritsky	University of Arizona	Tucson, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Arizona State University—Tempe, AZ	1	0	0
01 Oct 04	30 Sep 05	Columbia University—New York, NY	1	0	0
01 Oct 04	30 Sep 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	1	0	0
01 Oct 04	30 Sep 05	Institute for Advanced Study—Princeton, NJ	1	0	0
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	1	0	0
01 Oct 04	30 Sep 05	University of Arizona—Tucson, AZ	1	0	0
01 Oct 04	30 Sep 05	University of California, Berkeley—Berkeley, CA	1	0	0
01 Oct 04	30 Sep 05	University of California, Santa Barbara—Santa Barbara, CA	1	0	0
01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	1	0	0

A2. Hubble Space Telescope: Postdoctoral Fellowships

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: The Hubble Fellowships support outstanding postdoctoral scientists whose research is broadly related to the scientific mission of the Hubble Space Telescope. The research may be theoretical, observational, or instrumental. This program is open to applicants of any nationality who have earned their doctoral degrees on or after January 1, 2004, in astronomy, physics, or related disciplines. Listed below are the institutions hosting Fellows in 2005.

Lead: Dr. Michael Fall, Space Telescope Science Institute, Baltimore, MD 21218.

E-mail: fall@stsci.edu.

Primary URL: <http://www.stsci.edu/institute/org/spd/hubble-fellowship/hubble-fellow-overview>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	California Institute of Technology (Caltech)—Pasadena, CA	1	0	0
01 Oct 04	30 Sep 05	Carnegie Institution of Washington—Washington, DC	3	0	0
01 Oct 04	30 Sep 05	Carnegie Observatories—Pasadena, CA	1	0	0
01 Oct 04	30 Sep 05	Harvard University—Cambridge, MA	1	0	0
01 Oct 04	30 Sep 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	1	0	0
01 Oct 04	30 Sep 05	Institute for Advanced Study—Princeton, NJ	2	0	0
01 Oct 04	30 Sep 05	Lawrence Berkeley National Laboratory—Berkeley, CA	2	0	0
01 Oct 04	30 Sep 05	Princeton University—Princeton, NJ	3	0	0
01 Oct 04	30 Sep 05	Space Telescope Science Institute—Baltimore, MD	1	0	0
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	1	0	0
01 Oct 04	30 Sep 05	University of Arizona—Tucson, AZ	3	0	0
01 Oct 04	30 Sep 05	University of California, Berkeley—Berkeley, CA	2	0	0
01 Oct 04	30 Sep 05	University of California, Los Angeles—Los Angeles, CA	3	0	0
01 Oct 04	30 Sep 05	University of California, Santa Cruz—Santa Cruz, CA	1	0	0
01 Oct 04	30 Sep 05	University of Chicago—Chicago, IL	2	0	0
01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	2	0	0

01 Oct 04	30 Sep 05	University of Hawaii at Hilo—Hilo, HI	1	0	0
01 Oct 04	30 Sep 05	University of Texas at Austin—Austin, TX	1	0	0
01 Oct 04	30 Sep 05	University of Washington—Seattle, WA	2	0	0
01 Oct 04	30 Sep 05	University of Wisconsin-Madison—Madison, WI	1	0	0

A3. NASA Astrobiology Institute: Postdoctoral Fellowship Program

Theme(s): Astrophysics

Msn/Prgm: NAI[B62]

Description: The NAI Postdoctoral Fellowship Program provides opportunities for Ph.D., Sc.D., or M.D. scientists and engineers of unusual promise and ability to perform research on problems, largely of their own choosing, that are compatible with the research interests of NASA and the member teams of the NASA Astrobiology Institute. Listed below are the institutions hosting fellows in 2005, the number of fellows, and the fellow advisers.

Lead: Ms. Kristina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: Kristina.L.Wilmoth@nasa.gov.

Scientist(s):	Dr. Conel Alexander	Carnegie Institution of Washington	Washington, DC
	Dr. John Bally	University of Colorado, Boulder	Boulder, CO
	Dr. Steven Benner	University of Florida	Gainesville, FL
	Dr. Max Bernstein	NASA Ames Research Center	Moffett Field, CA
	Dr. Robert Blankenship	Arizona State University	Tempe, AZ
	Dr. Richard Castenholz	University of Oregon	Eugene, OR
	Dr. George Cody	Carnegie Institution of Washington	Washington, DC
	Dr. Katrina Edwards	Marine Biological Laboratory	Woods Hole, MA
	Dr. James Ferry	Pennsylvania State University	University Park, PA
	Dr. Eric Gaidos	University of Hawaii at Manoa	Honolulu, HI
	Dr. Andrea Ghez	University of California	San Diego, La Jolla, CA
	Dr. Johann Gogarten	Marine Biological Laboratory	Woods Hole, MA
	Dr. Russell Hemley	Carnegie Institution of Washington	Washington, DC
	Dr. Bruce Jakosky	University of Colorado, Boulder	Boulder, CO
	Dr. James Kasting	Pennsylvania State University	University Park, PA
	Dr. Andrew Knoll	Harvard University	Cambridge, MA
	Dr. Laurie Leshin	Arizona State University	Tempe, AZ
	Dr. David McKay	NASA Johnson Space Center	Houston, TX
	Dr. Victoria Meadows	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John Mustard	Brown University	Providence, RI
	Dr. Norman Pace	University of Colorado, Boulder	Boulder, CO
	Dr. David Peterson	NASA Ames Research Center	Moffett Field, CA
	Dr. Bruce Runnegar	University of California, Los Angeles	Los Angeles, CA
	Dr. Sara Seager	Carnegie Institution of Washington	Washington, DC
	Dr. Mitchell Sogin	Marine Biological Laboratory	Woods Hole, MA
	Dr. Jack Szostack	Harvard University	Cambridge, MA
	Dr. Andreas Teske	Marine Biological Laboratory	Woods Hole, MA
	Dr. Michael Thomashow	Michigan State University	East Lansing, MI
	Dr. James Tiedje	Michigan State University	East Lansing, MI
	Dr. Giovanna Tinetti	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Owen Toon	University of Colorado, Boulder	Boulder, CO
	Dr. Peter Ward	University of Washington	Seattle, WA
	Dr. Jennifer Wernergreen	Marine Biological Laboratory	Woods Hole, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Arizona State University—Tempe, AZ	2	0	0
01 Oct 04	30 Sep 05	Carnegie Institution of Washington—Washington, DC	4	0	0
01 Oct 04	30 Sep 05	Harvard University—Cambridge, MA	4	0	0
01 Oct 04	30 Sep 05	Marine Biological Laboratory—Woods Hole, MA	7	0	0
01 Oct 04	30 Sep 05	Michigan State University—East Lansing, MI	2	0	0
01 Oct 04	30 Sep 05	NASA Ames Research Center—Moffett Field, CA	3	0	0
01 Oct 04	30 Sep 05	NASA Jet Propulsion Laboratory—Pasadena, CA	1	0	0
01 Oct 04	30 Sep 05	NASA Johnson Space Center—Houston, TX	1	0	0
01 Oct 04	30 Sep 05	Pennsylvania State University—University Park, PA	2	0	0
01 Oct 04	30 Sep 05	Scripps Research Institute—La Jolla, CA	1	0	0
01 Oct 04	30 Sep 05	University of California, Los Angeles—Los Angeles, CA	2	0	0
01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	5	0	0
01 Oct 04	30 Sep 05	University of Hawaii at Manoa—Honolulu, HI	1	0	0
01 Oct 04	30 Sep 05	University of Washington—Seattle, WA	1	0	0

A4. New Investigator Program (NIP) in Earth Science

Theme(s): Earth Science

Msn/Prgm: SRT[B28]

Description: A single-investigator program designed for Earth system scientists and engineers early in their careers who are interested in integrating their research with education. All NIP proposals must contain both a research element and a significant program of education and outreach activities and/or interdisciplinary endeavors from which the community of practitioners in Earth, space, and environmental sciences can benefit.

Lead: Dr. Ming-Ying Wei, NASA Headquarters Science Mission Directorate, Washington, DC 20546.

E-mail: ming-ying.wei-1@nasa.gov. Phone: 202-358-0771.

Scientist(s):	Dr. Katherine Barbeau	Scripps Institution of Oceanography	La Jolla, CA
	Dr. Jeffrey Basara	University of Oklahoma	Norman, OK
	Dr. Eric Brown de Colstoun	Science Systems and Applications, Inc.	Lanham, MD
	Dr. Deirdre Byrne	University of Maine	Orono, ME
	Dr. Wil Cantrell	Michigan Technological University	Houghton, MI
	Dr. Daniel Cecil	University of Alabama at Huntsville	Huntsville, AL;
	Dr. Jianli Chen	University of Texas at Austin	Austin, TX;
	Dr. Pin Chen	NASA Jet Propulsion Laboratory	Pasadena, CA;
	Dr. Keith Cherkauer	Purdue University	West Lafayette, IN;
	Dr. Mark Cochran	Michigan State University	East Lansing, MI;
	Dr. Peter Colarco	University of Maryland at Baltimore County	Baltimore, MD;
	Dr. Ivan Csiszar	University of Maryland	College Park, MD;
	Dr. Carlos Del Castillo	NASA Stennis Space Center	Stennis Space Center, MS
	Dr. Larry Di Girolamo	University of Illinois at Urbana-Champaign	Urbana, IL;
	Dr. Jason Drake	University of Georgia	Athens, GA;
	Dr. Adam Fontecchio	Drexel University	Philadelphia PA;
	Dr. Richard Forster	University of Utah	Salt Lake City, UT;
	Dr. Nancy French	Michigan Tech Research Institute	Ann Arbor, MI
	Dr. Ann Fridlind	NASA Ames Research Center	Moffett Field, CA
	Dr. James Garrison	Purdue University	West Lafayette, IN
	Dr. Cathrine Graham	State University of New York (SUNY), Stony Brook	Stony Brook, NY
	Dr. Eric Hochberg	University of Hawaii at Manoa	Honolulu, HI
	Dr. Jose Miguel Hurtado	University of Texas at El Paso	El Paso, TX
	Dr. Laura Iraci	NASA Ames Research Center	Moffett Field, CA
	Dr. Jasmeet Judge	University of Florida	Gainesville, FL
	Dr. Nina Kelly	University of California, Berkeley	Berkeley, CA
	Dr. Andrew Klein	Texas A&M University	College Station, TX
	Dr. Carlton Leuschen	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. Antonio Mannino	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Steve Margulis	University of California, Los Angeles	Los Angeles, CA
	Dr. Denise Mauzerall	Princeton University	Princeton, NJ
	Dr. Joseph McFadden	University of Minnesota	Minneapolis, MN
	Dr. John Mecikalski	University of Wisconsin-Madison	Madison, WI
	Dr. Jeremy Mennis	University of Colorado	Boulder, Boulder, CO
	Dr. Joseph Messina	Michigan State University	East Lansing, MI
	Dr. John R. Morrison	University of New Hampshire	Durham, NH
	Dr. Athanasios Nenes	Georgia Institute of Technology	Atlanta, GA
	Dr. Kari O'Connell	Oregon State University	Corvallis, OR
	Dr. Adina Paytan	Stanford University	Stanford, CA
	Dr. Jeffrey Piepmeier	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Anthony Prenni	Colorado State University	Fort Collins, CO
	Dr. Volker Radeloff	University of Wisconsin-Madison	Madison, WI
	Dr. Joan Ramage	Creighton University	Creighton, NE
	Dr. Jens Redemann	NASA Ames Research Center	Moffett Field, CA
	Dr. John Ryan	Monterey Bay Aquarium Research Institute	Moss Landing, CA
	Dr. Eric Sanderson	Wildlife Conservation Society	Bronx, NY
	Dr. Edward Schuur	University of Florida	Gainesville, FL
	Dr. J. Marshall Shepherd	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Mark Simons	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Bjorn Stevens	University of California, Los Angeles	Los Angeles, CA
	Dr. Christopher Still	University of California, Santa Barbara	Santa Barbara, CA
	Dr. Simone Tanelli	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Joel Thornton	University of Washington	Seattle, WA
	Dr. Mete Uz	University of Maryland	College Park, MD
	Dr. Lianxing Wen	State University of New York (SUNY), Stony Brook	Stony Brook, NY
	Dr. Michael White	Utah State University	Logan, UT

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Oct 04	30 Sep 05	California Institute of Technology (Caltech)— Pasadena, CA	1	0	0
	01 Oct 04	30 Sep 05	Colorado State University—Fort Collins, CO	1	0	0
	01 Oct 04	30 Sep 05	Creighton University—Creighton, NE	1	0	0
	01 Oct 04	30 Sep 05	Drexel University—Philadelphia, PA	1	0	0
	01 Oct 04	30 Sep 05	Georgia Institute of Technology—Atlanta, GA	1	0	0
	01 Oct 04	30 Sep 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	1	0	0
	01 Oct 04	30 Sep 05	Michigan State University—East Lansing, MI	2	0	0
	01 Oct 04	30 Sep 05	Michigan Tech Research Institute— Ann Arbor, MI	1	0	0
	01 Oct 04	30 Sep 05	Michigan Technological University— Houghton, MI	1	0	0
	01 Oct 04	30 Sep 05	Monterey Bay Aquarium Research Institute— Moss Landing—CA,	1	0	0
	01 Oct 04	30 Sep 05	NASA Ames Research Center—Moffett Field, CA	3	0	0
	01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	3	0	0
	01 Oct 04	30 Sep 05	NASA Jet Propulsion Laboratory—Pasadena, CA	2	0	0
	01 Oct 04	30 Sep 05	NASA Stennis Space Center— Stennis Space Center, MS	1	0	0
	01 Oct 04	30 Sep 05	Oregon State University—Corvallis, OR	1	0	0
	01 Oct 04	30 Sep 05	Princeton University—Princeton, NJ	1	0	0
	01 Oct 04	30 Sep 05	Purdue University—West Lafayette, IN	2	0	0
	01 Oct 04	30 Sep 05	Science Systems and Applications, Inc.— Lanham, MD	1	0	0
	01 Oct 04	30 Sep 05	Scripps Institution of Oceanography— La Jolla, CA	1	0	0
	01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	1	0	0
	01 Oct 04	30 Sep 05	State University of New York (SUNY), Stony Brook—Stony Brook, NY	2	0	0
	01 Oct 04	30 Sep 05	Texas A&M University—College Station, TX	1	0	0
	01 Oct 04	30 Sep 05	University of Alabama at Huntsville— Huntsville, AL	1	0	0
	01 Oct 04	30 Sep 05	University of California, Berkeley—Berkeley, CA	1	0	0
	01 Oct 04	30 Sep 05	University of California, Los Angeles— Los Angeles, CA	2	0	0
	01 Oct 04	30 Sep 05	University of California, Santa Barbara— Santa Barbara, CA	1	0	0
	01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	1	0	0
	01 Oct 04	30 Sep 05	University of Florida—Gainesville, FL	2	0	0
	01 Oct 04	30 Sep 05	University of Georgia—Athens, GA	1	0	0
	01 Oct 04	30 Sep 05	University of Hawaii at Manoa—Honolulu, HI	1	0	0
	01 Oct 04	30 Sep 05	University of Illinois at Urbana-Champaign— Urbana, IL	1	0	0
	01 Oct 04	30 Sep 05	University of Maine—Orono, ME	1	0	0
	01 Oct 04	30 Sep 05	University of Maryland—College Park, MD	2	0	0
	01 Oct 04	30 Sep 05	University of Maryland at Baltimore County— Baltimore, MD	1	0	0
	01 Oct 04	30 Sep 05	University of Minnesota—Minneapolis, MN	1	0	0
	01 Oct 04	30 Sep 05	University of New Hampshire—Durham, NH	1	0	0
	01 Oct 04	30 Sep 05	University of Oklahoma—Norman, OK	1	0	0
	01 Oct 04	30 Sep 05	University of Texas at Austin—Austin, TX	1	0	0
	01 Oct 04	30 Sep 05	University of Texas at El Paso—El Paso, TX	1	0	0
	01 Oct 04	30 Sep 05	University of Utah—Salt Lake City, UT	1	0	0
	01 Oct 04	30 Sep 05	University of Washington—Seattle, WA	1	0	0
	01 Oct 04	30 Sep 05	University of Wisconsin-Madison—Madison, WI	2	0	0
	01 Oct 04	30 Sep 05	Utah State University—Logan, UT	1	0	0
	01 Oct 04	30 Sep 05	Wildlife Conservation Society—Bronx, NY	1	0	0

A5. Sagan/Haskin Fellowships

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: The Carl Sagan and Larry Haskin Fellowships for Early Career Researchers facilitate the integration of new planetary science discipline researchers into the established research funding programs and provide tools and experience that are useful when searching for a more advanced position.

Lead:	Dr. Curt Niebur, NASA Headquarters Science Mission Directorate, Washington, DC 20546. E-mail: curt.niebur@nasa.gov .		
Scientist(s):	Dr. Olivier Barnouin-Jha	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. David Brain	University of California, Berkeley	Berkeley, CA
	Dr. Lynn Carter	Smithsonian Institution, Center for Earth and Planetary Science	Washington, DC
	Dr. Andrew Dombard	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. Lori Fenton	Arizona State University	Tempe, AZ
	Dr. Jonathan Fortney	NASA Ames Research Center	Moffett Field, CA
	Dr. Justin Haggerty	Los Alamos National Laboratory	Los Alamos, NM
	Dr. Ken "KC" Hansen	University of Michigan	Ann Arbor, MI
	Dr. Michelle Minitti	Arizona State University	Tempe, AZ
	Dr. David O'Brien	Planetary Science Institute	Tucson, AZ
	Dr. Chris Okubo	University of Arizona	Tucson, AZ
	Dr. Rebecca Williams	Smithsonian Institution, Center for Earth and Planetary Science	Washington, DC

Higher Education Student Support

A6. Living With a Star (LWS) Student Internship

Theme(s): Heliophysics
Msn/Prgm: LWS/PO[B90]
Description: The NASA Solar Terrestrial Probes (STP)/LWS Summer Internship offers an opportunity to students to contribute directly to NASA GSFC's missions. The program pairs up students with a variety of scientists, engineers, and technicians who help support the Sun-Earth Connection program. The Summer Intern Program was established for the benefit of high school and undergraduate college students interested in degrees in engineering and space science-disciplines of vital interest to GSFC. Since its inception, it has grown into a program that also provides internship experience in supporting offices like Education and Public Affairs. The program is intended to encourage students both to pursue and to earn engineering and space science degrees and to enhance their interest in careers at GSFC by exposing them to its professional resources and facilities. Participants were from local universities (George Washington University, St. Mary's College in Maryland, and the University of Maryland, College Park), Historically Black Colleges and Universities (Virginia Union and Hampton University), predominantly Latino universities (the University of Puerto Rico, Mayagüez, and the University of Puerto Rico, Humacao), and technical and nontechnical universities (South Oregon University and Embry-Riddle Aeronautical University, Daytona Beach). The interns came from across the country and worked in engineering, physics, business, education, and public affairs.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary

URL: <http://stp.gsfc.nasa.gov>

Scientist(s):	Ms. Chikia Barnes	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Sara Brown	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Sol Colina-Trujillo	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Gilberto Colon	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Robert Gutro	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Fred Herrero	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. George Hilton	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Susan Hoban	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Raymond Pages	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Mark Shappirio	Los Alamos National Laboratory	Los Alamos, NM
	Dr. Chris St. Cyr	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Florence Tan	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Stephen Wasserzug	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Jun 05	05 Aug 05	NASA Goddard Space Flight Center— Greenbelt, MD	15	0	0

Student Involvement Higher Education

A7. Atmospheric Infrared Sounder (AIRS) Student Internship

Theme(s): Earth Science
Msn/Prgm: Aqua[B2]
Description: A student intern was retained by the AIRS project for the summer of 2005. The intern is part of the Alliance for Learning and Vision for Underrepresented Americans (ALVA) program, a minority internship program that part-

ners with the University of Washington. The student worked alongside the AIRS outreach coordinator and was tasked to play a key role in the creation of the AIRS Web pages. Interaction with AIRS scientists was imperative. The intern also helped with weekly Web image releases through both content gathering and Web coding.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

A8. Earth System Science Fellowship Program

Theme(s): Earth Science

Msn/Prgm: ACRIMSAT[B1], Earth System Science Fellowship Program[B14]

Description: The NASA Earth System Science (ESS) Fellowship Program offers competitive, selected graduate students pursuing master's or Ph.D. degrees in Earth system science and applied research opportunities for continued training as interdisciplinary scientists to support the study of Earth as a system. Particular emphasis is placed on the applicant's ability and interest in pursuing academic training and research using Earth remote sensing. Over 150 Ph.D. and M.S. fellowships were awarded in 2005. Shown below are the mentors and institutions participating in the 2005 program.

Lead: Dr. Ming-Ying Wei, NASA Headquarters Science Mission Directorate, Washington, DC 20546.

E-mail: ming-ying.wei-1@nasa.gov. Phone: 202-358-0771.

Primary URL: <http://science.hq.nasa.gov/education/catalog/programs/Programs49.html>

Scientist(s):	Dr. John D. Albertson	Duke University	Durham, NC
	Dr. Richard Allmendinger	Cornell University	Ithaca, NY
	Dr. Faulk Amelung	University of Miami	Miami, FL
	Dr. Emmanouil N. Anagnostou	University of Connecticut	Storrs-Mansfield, CT
	Dr. Bruce Anderson	Boston University	Boston, MA
	Dr. James G. Anderson	Harvard University	Cambridge, MA
	Dr. Kevin Arrigo	Stanford University	Stanford, CA
	Dr. Roni Avissar	Duke University	Durham, NC
	Dr. Dennis Baldocchi	University of California	Berkeley, Berkeley, CA
	Dr. George Bergantz	University of Washington	Seattle, WA
	Dr. Joe Andrew Berry	Stanford University	Stanford, CA
	Dr. Michael W. Binford	University of Florida	Gainesville, FL
	Dr. Jeremy Bloxham	Harvard University	Cambridge, MA
	Dr. David A. Braaten	University of Kansas	Lawrence, KS
	Dr. Daniel G. Brown	University of Michigan	Ann Arbor, MI
	Dr. Mark A. Cane	Columbia University	New York, NY
	Dr. David Carr	University of North Carolina-Chapel Hill	Chapel Hill, NC
	Dr. Oliver Chadwick	University of California, Santa Barbara	Santa Barbara, CA
	Dr. Ping Chang	Texas A&M University	College Station, TX
	Dr. Allan Clarke	Florida State University	Tallahassee, FL
	Dr. Antony D. Clarke	University of Hawaii at Manoa	Honolulu, HI
	Dr. Warren Cohen	Oregon State University	Corvallis, OR
	Dr. Richard Conant	Colorado State University	Fort Collins, CO
	Dr. Kerry Cook	Cornell University	Ithaca, NY
	Dr. Kelley Crews-Meyer	University of Texas at Austin	Austin, TX
	Dr. Kurt Cuffey	University of California, Berkeley	Berkeley, CA
	Dr. Paul Davidovits	Boston College	Chestnut Hill, MA
	Dr. Ruth DeFries	University of Maryland	College Park, MD
	Dr. James Dolan	University of Southern California	Los Angeles, CA
	Dr. Steven Louis Dorobek	Texas A&M University	College Station, TX
	Dr. Dara Entekhabi	Massachusetts Institute of Technology	Cambridge, MA
	Dr. William Fagan	University of Maryland	College Park, MD
	Dr. James Famiglietti	University of California, Irvine	Irvine, CA
	Dr. Steven Fassnacht	Colorado State University	Fort Collins, CO
	Dr. Luke Flynn	University of Hawaii at Manoa	Honolulu, HI
	Dr. Efi Foufoula-Georgiou	University of Minnesota	Minneapolis, MN
	Dr. Inez Fung	University of California, Berkeley	Berkeley, CA
	Dr. Matteo Garbelotto	University of California, Berkeley	Berkeley, CA
	Dr. James Garrison	Purdue University	West Lafayette, IN
	Dr. Thomas Gillespie	University of California, Los Angeles	Los Angeles, CA
	Dr. Larry Girolamo	University of Illinois at Urbana-Champaign	Urbana, IL
	Dr. Anatoly Gitelson	University of Nebraska-Lincoln	Lincoln, NE
	Dr. Prasad Gogineni	University of Kansas	Lawrence, KS
	Dr. Gavin Gong	Columbia University	New York, NY
	Dr. Peng Gong	University of California, Berkeley	Berkeley, CA
	Dr. Michael Goulden	University of California, Irvine	Irvine, CA
	Dr. Nicolas Gruber	University of California, Los Angeles	Los Angeles, CA
	Dr. Gordon Hamilton	University of Maine	Orono, ME
	Dr. Lawrence Harding	University of Maryland	College Park, MD
	Dr. John Harte	University of California, Berkeley	Berkeley, CA

Dr. Geoffrey Henebry	University of Nebraska-Lincoln	Lincoln, NE
Dr. Katherine Hirschboeck	University of Arizona	Tucson, AZ
Dr. David Holland	New York University	New York, NY
Dr. Robert Houze	University of Washington	Seattle, WA
Dr. Stuart Hurlbert	University of California, Davis	Davis, CA
Dr. Daniel Jacob	Harvard University	Cambridge, MA
Dr. Jennifer Jacobs	University of New Hampshire	Durham, NH
Dr. Kenneth Jezek	Ohio State University	Columbus, OH
Dr. Jose-Luis Jimenez	University of Colorado, Boulder	Boulder, CO
Dr. Jasmeet Judge	University of Florida	Gainesville, FL
Dr. Christopher Justice	University of Maryland	College Park, MD
Dr. Eric Kasischke	University of Maryland	College Park, MD
Dr. Suzanne Kay	Cornell University	Ithaca, NY
Dr. Ralph Keeling	University of California, San Diego	La Jolla, CA
Dr. Eric Kirby	Pennsylvania State University	University Park, PA
Dr. Sonia Kreidenweis	Colorado State University	Fort Collins, CO
Dr. Paul Kucera	University of North Dakota	Grand Forks, ND
Dr. Praveen Kumar	University of Illinois at Urbana-Champaign	Urbana, IL
Dr. Christian Kummerow	Colorado State University	Fort Collins, CO
Dr. Phaeton Kyriakidis	University of California, Santa Barbara	Santa Barbara, CA
Dr. Venkataraman Lakshmi	University of South Carolina	Columbia, SC
Dr. Kristine Larson	University of Colorado, Boulder	Boulder, CO
Dr. Michael Lefsky	Colorado State University	Fort Collins, CO
Dr. Steven Lentz	Woods Hole Oceanographic Institute	Woods Hole, MA
Dr. Arthur Lerner-Lam	Columbia University	New York, NY
Dr. Ricardo Maria Letelier	Oregon State University	Corvallis, OR
Dr. Glenn Lightsey	University of Texas at Austin	Austin, TX
Dr. Marcy Ellen Litvak	University of Texas at Austin	Austin, TX
Dr. Jack Liu	Michigan State University	East Lansing, MI
Dr. Rocco Malservisi	University of Miami	Miami, FL
Dr. Huiting Mao	University of New Hampshire	Durham, NH
Dr. Steve Margulis	University of California, Los Angeles	Los Angeles, CA
Dr. Stuart Marsh	University of Arizona	Tucson, AZ
Dr. Mary E. Martin	University of New Hampshire	Durham, NH
Dr. James Maslanik	University of Colorado, Boulder	Boulder, CO
Dr. Greg McFarquhar	University of Illinois at Urbana-Champaign	Urbana, IL
Dr. Peter Minnett	University of Miami	Miami, FL
Dr. Tomoaki Miura	University of Hawaii at Manoa	Honolulu, HI
Dr. Peter Molnar	University of Colorado, Boulder	Boulder, CO
Dr. Aaron Moody	University of North Carolina-Chapel Hill	Chapel Hill, NC
Dr. Athanasios Nenes	Georgia Institute of Technology	Atlanta, GA
Dr. R. Steven Nerem	University of Colorado, Boulder	Boulder, CO
Dr. Sumant Nigam	University of Maryland	College Park, MD
Dr. Doran Nof	Florida State University	Tallahassee, FL
Dr. Mitchio Okumura	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Wayne Patterson	Howard University	Washington, DC
Dr. Robert Peet	University of North Carolina-Chapel Hill	Chapel Hill, NC
Dr. Gilles Peltzer	University of California, Los Angeles	Los Angeles, CA
Dr. Roger Pielke, Sr.	Colorado State University	Fort Collins, CO
Dr. Stuart Pimm	Duke University	Durham, NC
Dr. Paul D. Quay	University of Washington	Seattle, WA
Dr. Cora Randall	University of Colorado, Boulder	Boulder, CO
Dr. Robert Rhoades	University of Georgia	Athens, GA
Dr. Christopher Stephan Ruf	University of Michigan	Ann Arbor, MI
Dr. John B. Rundle	University of California, Davis	Davis, CA
Dr. Christopher Russell	University of California, Los Angeles	Los Angeles, CA
Dr. Dork Sahagian	University of New Hampshire	Durham, NH
Dr. David Sandwell	Scripps Institution of Oceanography	La Jolla, CA
Dr. Jorge Sarmiento	Princeton University	Princeton, NJ
Dr. Geoffrey Schladow	University of California, Davis	Davis, CA
Dr. Tapio Schneider	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Richard Seager	Columbia University	New York, NY
Dr. Paul Segall	Stanford University	Stanford, CA
Dr. Herman Shugart	University of Virginia	Charlottesville, VA
Dr. David A. Siegel	University of California, Santa Barbara	Santa Barbara, CA
Dr. Didier Sornette	University of California, Los Angeles	Los Angeles, CA
Dr. Jane Southworth	University of Florida	Gainesville, FL
Dr. Robert Spear	University of California, Berkeley	Berkeley, CA

Dr. Bjorn Stevens	University of California, Los Angeles	Los Angeles, CA
Dr. Christopher Still	University of California, Santa Barbara	Santa Barbara, CA
Dr. Peter Strutton	Oregon State University	Corvallis, OR
Dr. Christopher Sundar	University of Alabama at Huntsville	Huntsville, AL
Dr. Byron Tapley	University of Texas at Austin	Austin, TX
Dr. Joel Thornton	University of Washington	Seattle, WA
Dr. Margaret Tolbert	University of Colorado, Boulder	Boulder, CO
Dr. Brian Toon	University of Colorado, Boulder	Boulder, CO
Dr. Susan Trumbore	University of California, Irvine	Irvine, CA
Dr. Bille Turner II	Clark University	Worcester, MA
Dr. Dean Urban	Duke University	Durham, NC
Dr. Edward Van Vleet	University of South Florida	Tampa, FL
Dr. Stephen J. Walsh	University of North Carolina-Chapel Hill	Chapel Hill, NC
Dr. Guiling Wang	University of Connecticut	Storrs-Mansfield, CT
Dr. Christopher Weaver	Rutgers University	Piscataway, NJ
Dr. John Weishampel	University of Central Florida	Orlando, FL
Dr. Jeffrey Weissel	Columbia University	New York, NY
Dr. Ronald Welch	University of Alabama at Huntsville	Huntsville, AL
Dr. Terry Wilson	Ohio State University	Columbus, OH
Dr. Steven Wofsy	Harvard University	Cambridge, MA
Dr. Xiangming Xiao	University of New Hampshire	Durham, NH
Dr. Ping Yang	Texas A&M University	College Station, TX
Dr. Joseph Yavitt	Cornell University	Ithaca, NY
Dr. James Yoder	University of Rhode Island	Narragansett, RI
Dr. Yuk Yung	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Charles Zender	University of California, Irvine	Irvine, CA
Dr. Renyl Zhang	Texas A&M University	College Station, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Boston College—Chestnut Hill, MA	3	0	0
01 Oct 04	30 Sep 05	California Institute of Technology (Caltech)—Pasadena, CA	3	0	0
01 Oct 04	30 Sep 05	Clark University—Worcester, MA	1	0	0
01 Oct 04	30 Sep 05	Colorado State University—Fort Collins, CO	7	0	0
01 Oct 04	30 Sep 05	Columbia University—New York, NY	5	0	0
01 Oct 04	30 Sep 05	Cornell University—Ithaca, NY	4	0	0
01 Oct 04	30 Sep 05	Duke University—Durham, NC	4	0	0
01 Oct 04	30 Sep 05	Florida State University—Tallahassee, FL	3	0	0
01 Oct 04	30 Sep 05	Georgia Institute of Technology—Atlanta, GA	2	0	0
01 Oct 04	30 Sep 05	Harvard University—Cambridge, MA	4	0	0
01 Oct 04	30 Sep 05	Howard University—Washington, DC	1	0	0
01 Oct 04	30 Sep 05	Massachusetts Institute of Technology—Cambridge, MA	1	0	0
01 Oct 04	30 Sep 05	Michigan State University—East Lansing, MI	1	0	0
01 Oct 04	30 Sep 05	New York University—New York, NY	1	0	0
01 Oct 04	30 Sep 05	Ohio State University—Columbus, OH	2	0	0
01 Oct 04	30 Sep 05	Oregon State University—Corvallis, OR	3	0	0
01 Oct 04	30 Sep 05	Pennsylvania State University—University Park, PA	1	0	0
01 Oct 04	30 Sep 05	Princeton University—Princeton, NJ	1	0	0
01 Oct 04	30 Sep 05	Purdue University—West Lafayette, IN	1	0	0
01 Oct 04	30 Sep 05	Rutgers University—Piscataway, NJ	1	0	0
01 Oct 04	30 Sep 05	Scripps Institution of Oceanography—La Jolla, CA	1	0	0
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	5	0	0
01 Oct 04	30 Sep 05	Texas A&M University—College Station, TX	4	0	0
01 Oct 04	30 Sep 05	University of Alabama at Huntsville—Huntsville, AL	2	0	0
01 Oct 04	30 Sep 05	University of Arizona—Tucson, AZ	2	0	0
01 Oct 04	30 Sep 05	University of California, Berkeley—Berkeley, CA	9	0	0
01 Oct 04	30 Sep 05	University of California, Davis—Davis, CA	3	0	0
01 Oct 04	30 Sep 05	University of California, Irvine—Irvine, CA	6	0	0
01 Oct 04	30 Sep 05	University of California, Los Angeles—Los Angeles, CA	8	0	0
01 Oct 04	30 Sep 05	University of California, Santa Barbara—Santa Barbara, CA	5	0	0
01 Oct 04	30 Sep 05	University of Central Florida—Orlando, FL	1	0	0
01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	10	0	0

01 Oct 04	30 Sep 05	University of Connecticut—Storrs-Mansfield, CT	2	0	0
01 Oct 04	30 Sep 05	University of Florida—Gainesville, FL	3	0	0
01 Oct 04	30 Sep 05	University of Georgia—Athens, GA	2	0	0
01 Oct 04	30 Sep 05	University of Hawaii at Manoa—Honolulu, HI	4	0	0
01 Oct 04	30 Sep 05	University of Illinois at Urbana-Champaign— Urbana, IL	3	0	0
01 Oct 04	30 Sep 05	University of Kansas—Lawrence, KS	3	0	0
01 Oct 04	30 Sep 05	University of Maine at Farmington— Farmington, ME	11	0	0
01 Oct 04	30 Sep 05	University of Maryland—College Park, MD	9	0	0
01 Oct 04	30 Sep 05	University of Miami—Miami, FL	3	0	0
01 Oct 04	30 Sep 05	University of Michigan—Ann Arbor, MI	2	0	0
01 Oct 04	30 Sep 05	University of Minnesota—Minneapolis, MN	2	0	0
01 Oct 04	30 Sep 05	University of Nebraska-Lincoln—Lincoln, NE	2	0	0
01 Oct 04	30 Sep 05	University of New Hampshire—Durham, NH	5	0	0
01 Oct 04	30 Sep 05	University of North Carolina-Chapel Hill— Chapel Hill, NC	4	0	0
01 Oct 04	30 Sep 05	University of North Dakota—Grand Forks, ND	1	0	0
01 Oct 04	30 Sep 05	University of Rhode Island—Narragansett, RI	1	0	0
01 Oct 04	30 Sep 05	University of South Carolina—Columbia, SC	1	0	0
01 Oct 04	30 Sep 05	University of South Florida—Tampa, FL	1	0	0
01 Oct 04	30 Sep 05	University of Southern California— Los Angeles, CA	1	0	0
01 Oct 04	30 Sep 05	University of Texas at Austin—Austin, TX	4	0	0
01 Oct 04	30 Sep 05	University of Virginia—Charlottesville, VA	1	0	0
01 Oct 04	30 Sep 05	University of Washington—Seattle, WA	4	0	0
01 Oct 04	30 Sep 05	Woods Hole Oceanographic Institute— Woods Hole, MA	1	0	0

A9. Graduate Student Researchers Program (GSRP)

Theme(s): Earth Science, Heliophysics, Astrophysics, Planetary

Msn/Prgm: SRT[B28]

Description: GSRP awards fellowships for graduate study leading to master's and doctoral degrees in science, mathematics, and engineering fields that are related to NASA research and development. The fellowships are funded by NASA's Office of Education and Science Mission Directorate. Listed below are the faculty advisers, host institutions, and number of fellows for 2005.

Lead: Ms. Doris Daou, California Institute of Technology (Caltech), Pasadena, CA 91125.

E-mail: daou@ipac.caltech.edu. Phone: 626-395-8668.

Primary URL: <http://fellowships.hq.nasa.gov/gsrp/nav/>

Scientist(s):	Dr. Eric Agol	University of Washington	Seattle, WA
	Dr. Spiro Antiochos	University of Michigan	Ann Arbor, MI
	Dr. Erik Asphaug	University of California, Santa Cruz	Santa Cruz, CA
	Dr. Scott Bailey	University of Alaska, Fairbanks	Fairbanks, AK
	Dr. Serge Belongie	University of California, San Diego	La Jolla, CA
	Dr. Peter Bender	University of Colorado, Boulder	Boulder, CO
	Dr. Karen Bjorkman	University of Toledo	Toledo, OH
	Dr. Kenneth Brecher	Boston University	Boston, MA
	Dr. Michael Brown	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Blas Cabera	Stanford University	Stanford, CA
	Dr. Christopher Churchill	New Mexico State University, Las Cruces	Las Cruces, NM
	Dr. Chris Chyba	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Dr. Laird Close	University of Arizona	Tucson, AZ
	Dr. Richard Durisen	Indiana University, Bloomington	Bloomington, IN
	Dr. Michael DuVernois	University of Minnesota	Minneapolis, MN
	Dr. Neal Evans	University of Texas at Austin	Austin, TX
	Dr. George Fisher	University of California, Berkeley	Berkeley, CA
	Dr. Jeffrey Forbes	University of Colorado, Boulder	Boulder, CO
	Dr. Jason Glenn	University of Colorado, Boulder	Boulder, CO
	Dr. Sunil Golwala	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Brian Greene	Columbia University	New York, NY
	Dr. Zoltan Haiman	Columbia University	New York, NY
	Dr. Shaul Hanany	University of Minnesota	Minneapolis, MN
	Dr. Fiona Harrison	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Robert Johnson	University of Virginia	Charlottesville, VA
	Dr. Charles Kankelborg	Montana State University	Bozeman, MT
	Dr. Craig Kletzing	University of Iowa	Iowa City, IA
	Dr. Shri Kulkarni	California Institute of Technology (Caltech)	Pasadena, CA

Dr. Andrew Lange	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Adrian Lee	University of California, Berkeley	Berkeley, CA
Dr. Phil Lubin	University of California, Santa Barbara	Santa Barbara, CA
Dr. Steven Majewski	University of Virginia	Charlottesville, VA
Dr. Chris Martin	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Ian McLean	University of California, Los Angeles	Los Angeles, CA
Dr. Michael Mendillo	Boston University	Boston, MA
Dr. Joseph Mohr	University of Illinois at Urbana-Champaign	Urbana, IL
Dr. James Murphy	New Mexico State University, Las Cruces	Las Cruces, NM
Dr. Ramesh Narayan	Harvard University	Cambridge, MA
Dr. Terry Oswalt	Florida Institute of Technology	Melbourne, FL
Dr. Eliot Quataert	University of California, Berkeley	Berkeley, CA
Dr. Henk Roelink	University of Washington	Seattle, WA
Dr. David Schiminovich	Columbia University	New York, NY
Dr. Peter Schultz	Brown University	Providence, RI
Dr. Stuart Shapiro	University of Illinois at Urbana-Champaign	Urbana, IL
Dr. Thomas Sharp	Arizona State University	Tempe, AZ
Dr. Adam Showman	University of Arizona	Tucson, AZ
Dr. Gordon Stacey	Cornell University	Ithaca, NY
Dr. Sarah Stewart-Mukhopadhyay	Harvard University	Cambridge, MA
Dr. Jeff Taylor	University of Hawaii at Manoa	Honolulu, HI
Dr. Charles Telesco	University of Florida	Gainesville, FL
Dr. Margaret Tolbert	University of Colorado, Boulder	Boulder, CO
Dr. Juri Toomre	University of Colorado, Boulder	Boulder, CO
Dr. Owen Toon	University of Colorado, Boulder	Boulder, CO
Dr. David Valentine	University of California, Santa Barbara	Santa Barbara, CA
Dr. Ira Wasserman	Cornell University	Ithaca, NY
Dr. Jonathan Williams	University of Hawaii at Manoa	Honolulu, HI
Dr. Thomas Zurbuchen	University of Michigan	Ann Arbor, MI

Event(s):						
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.	
01 Oct 04	30 Sep 05	Arizona State University—Tempe, AZ	3	0	0	
01 Oct 04	30 Sep 05	Boston University—Boston, MA	3	0	0	
01 Oct 04	30 Sep 05	California Institute of Technology (Caltech)— Pasadena, CA	6	0	0	
01 Oct 04	30 Sep 05	Columbia University—New York, NY	3	0	0	
01 Oct 04	30 Sep 05	Cornell University—Ithaca, NY	2	0	0	
01 Oct 04	30 Sep 05	Florida Institute of Technology—Melbourne, FL	1	0	0	
01 Oct 04	30 Sep 05	Harvard University—Cambridge, MA	2	0	0	
01 Oct 04	30 Sep 05	Indiana University, Bloomington— Bloomington, IN	1	0	0	
01 Oct 04	30 Sep 05	Montana State University—Bozeman, MT	1	0	0	
01 Oct 04	30 Sep 05	New Mexico State University, Las Cruces— Las Cruces, NM	2	0	0	
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	2	0	0	
01 Oct 04	30 Sep 05	University of Alaska, Fairbanks—Fairbanks, AK	1	0	0	
01 Oct 04	30 Sep 05	University of Arizona—Tucson, AZ	2	0	0	
01 Oct 04	30 Sep 05	University of California, Berkeley—Berkeley, CA	3	0	0	
01 Oct 04	30 Sep 05	University of California, Los Angeles— Los Angeles, CA	1	0	0	
01 Oct 04	30 Sep 05	University of California, San Diego—La Jolla, CA	1	0	0	
01 Oct 04	30 Sep 05	University of California, Santa Barbara— Santa Barbara, CA	2	0	0	
01 Oct 04	30 Sep 05	University of California, Santa Cruz— Santa Cruz, CA	1	0	0	
01 Oct 04	30 Sep 05	University of Colorado, Boulder—Boulder, CO	6	0	0	
01 Oct 04	30 Sep 05	University of Florida—Gainesville, FL	1	0	0	
01 Oct 04	30 Sep 05	University of Hawaii at Manoa—Honolulu, HI	2	0	0	
01 Oct 04	30 Sep 05	University of Illinois at Urbana-Champaign— Urbana, IL	2	0	0	
01 Oct 04	30 Sep 05	University of Iowa—Iowa City, IA	1	0	0	
01 Oct 04	30 Sep 05	University of Michigan—Ann Arbor, MI	2	0	0	
01 Oct 04	30 Sep 05	University of Minnesota—Minneapolis, MN	2	0	0	
01 Oct 04	30 Sep 05	University of Texas at Austin—Austin, TX	1	0	0	
01 Oct 04	30 Sep 05	University of Toledo—Toledo, OH	1	0	0	
01 Oct 04	30 Sep 05	University of Virginia—Charlottesville, VA	2	0	0	
01 Oct 04	30 Sep 05	University of Washington—Seattle, WA	2	0	0	

A10. NASA Planetary Science Summer School

Theme(s): Planetary

Msn/Prgm: JPL SSE[B96]

Description: A 1-week intensive team exercise in learning the process of developing a robotic mission concept into reality through concurrent engineering was held at NASA Jet Propulsion Laboratory (JPL). The program was for science and engineering postdoctoral and graduate students with a strong interest in careers in planetary exploration. The trainees participated in a team activity to develop a mission proposal, working with JPL's Advanced Projects Design Team ("Team X") and other concurrent engineering teams. Using JPL's Project Design Center, trainees assumed roles including Principal Investigator, project manager, and mission and system designers. They were mentored and assisted by corresponding JPL proposal organizers and Team X members. The team carried out the equivalent of an early concept study responsive to a selected NASA Science Mission Directorate Announcement of Opportunity, prepared a proposal authorization review presentation, presented it to a review board, and received feedback. The mission concept topic was selected in advance either by the trainees (with the help of their professors) or by the course organizers. Presession readings and telecons were designed to help trainees develop a good understanding of top-level science requirements and instrument priorities in advance. The participants were from nearly 40 different institutions, listed below.

Lead: Ms. Anita Sohus, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Anita.M.Sohus@jpl.nasa.gov. Phone: 818-354-6613.Primary URL: <http://www2.jpl.nasa.gov/pscischool/>

Scientist(s):	Dr. Tibor Balint	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Luther Beegle	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Ed Danielson, Jr.	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Eric DeJong	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jackie Greene	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Samuel Gulkis	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Linda Spilker	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Thomas Spilker	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Gregory Wilson	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jul 05	15 Aug 05	Brown University—Providence, RI	6	0	0
01 Jul 05	15 Aug 05	California Institute of Technology (Caltech)—Pasadena, CA	2	0	0
01 Jul 05	15 Aug 05	Carnegie Mellon University—Pittsburgh, PA	1	0	0
01 Jul 05	15 Aug 05	Drexel University—Philadelphia, PA	1	0	0
01 Jul 05	15 Aug 05	Georgia Institute of Technology—Atlanta, GA	1	0	0
01 Jul 05	15 Aug 05	Massachusetts Institute of Technology—Cambridge, MA	2	0	0
01 Jul 05	15 Aug 05	Montana State University—Billings, MT	2	0	0
01 Jul 05	15 Aug 05	Princeton University—Princeton, NJ	1	0	0
01 Jul 05	15 Aug 05	Rensselaer Polytechnic Institute—Troy, NY	1	0	0
01 Jul 05	15 Aug 05	Scripps Institution of Oceanography—La Jolla, CA	1	0	0
01 Jul 05	15 Aug 05	Stanford University—Stanford, CA	4	0	0
01 Jul 05	15 Aug 05	State University of New York (SUNY), Stony Brook—Stony Brook, NY	1	0	0
01 Jul 05	15 Aug 05	Tennessee Technological University—Cookeville, TN	1	0	0
01 Jul 05	15 Aug 05	Texas Christian University—Fort Worth, TX	2	0	0
01 Jul 05	15 Aug 05	University of Arkansas—Fayetteville, AR	1	0	0
01 Jul 05	15 Aug 05	University of California, Berkeley—Berkeley, CA	3	0	0
01 Jul 05	15 Aug 05	University of California, Los Angeles—Los Angeles, CA	3	0	0
01 Jul 05	15 Aug 05	University of California, San Diego—La Jolla, CA	1	0	0
01 Jul 05	15 Aug 05	University of California, Santa Cruz—Santa Cruz, CA	2	0	0
01 Jul 05	15 Aug 05	University of Colorado, Boulder—Boulder, CO	8	0	0
01 Jul 05	15 Aug 05	University of Denver—Denver, CO	1	0	0
01 Jul 05	15 Aug 05	University of Illinois at Urbana-Champaign—Urbana, IL	1	0	0
01 Jul 05	15 Aug 05	University of Kansas—Lawrence, KS	1	0	0
01 Jul 05	15 Aug 05	University of Massachusetts—Amherst, MA	2	0	0
01 Jul 05	15 Aug 05	University of Michigan—Ann Arbor, MI	6	0	0
01 Jul 05	15 Aug 05	University of Minnesota—Minneapolis, MN	1	0	0
01 Jul 05	15 Aug 05	University of Nevada, Las Vegas—Las Vegas, NV	1	0	0
01 Jul 05	15 Aug 05	University of Nevada, Reno—Reno, NV	1	0	0
01 Jul 05	15 Aug 05	University of New Mexico—Albuquerque, NM	1	0	0

01 Jul 05	15 Aug 05	University of North Texas—Denton, TX	1	0	0
01 Jul 05	15 Aug 05	University of Notre Dame—Notre Dame, IN	1	0	0
01 Jul 05	15 Aug 05	University of Regina—Regina, Canada	1	0	0
01 Jul 05	15 Aug 05	University of Southern California— Los Angeles, CA	1	0	0
01 Jul 05	15 Aug 05	University of Tennessee—Knoxville, TN	1	0	0
01 Jul 05	15 Aug 05	University of Texas at Austin—Austin, TX	1	0	0
01 Jul 05	15 Aug 05	University of Virginia—Charlottesville, VA	4	0	0
01 Jul 05	15 Aug 05	University of Washington—Seattle, WA	1	0	0
01 Jul 05	15 Aug 05	Utah State University—Logan, UT	1	0	0
01 Jul 05	15 Aug 05	Virginia Polytechnic Institute and State University—Blacksburg, VA	2	0	0
01 Jul 05	15 Aug 05	Washington University in St. Louis— St. Louis, MO	2	0	0

Higher Education Course Development

A11. Cosmos in the Classroom 2004-Resource Book

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40], JPL SSE[B96]

Description: The "Cosmos in the Classroom 2004" conference was held July 15—18, 2004, at Tufts University near Boston. Approximately 200 faculty from high schools, community colleges, 4-year colleges, and universities throughout North America gathered for professional development in teaching introductory astronomy. Scholarships from JPL's Navigator Program and the Massachusetts Space Grant Consortium ensured that many underserved faculty from community colleges and elsewhere were able to participate. The conference featured plenary talks, panel discussions, hands-on workshops, a planetarium demonstration, and a theatrical performance that humanized our links with the cosmos. Proceedings from the conference have been published by the Astronomical Society of the Pacific. Additional papers have appeared in the *Astronomy Education Review*, a peer-reviewed e-journal. Further outcomes include regional Cosmos in the Classroom faculty development workshops sponsored by the Navigator Program and a special followup session that occurred at the January American Astronomical Society (AAS) meeting in San Diego.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org. Phone: 617-589-4228.

Primary URL: <http://www.astrosociety.org/education.html>

Secondary

URL: <http://www.mos.org/nessie>

Scientist(s):	Dr. Andrew Fraknoi	Astronomical Society of the Pacific	San Francisco, CA
	Dr. William Waller	Museum of Science	Boston, MA

Partner(s):	American Astronomical Society	Washington, DC
	Astronomical Society of the Pacific	San Francisco, CA
	Massachusetts Space Grant Consortium	Cambridge, MA
	National Optical Astronomy Observatory	Tucson, AZ
	National Science Foundation	Arlington, VA
	New England Space Science Initiative in Education (NESSIE)	Boston, MA
	Tufts University	Medford, MA

A12. NASA Earth Observing System (EOS) Higher Education Alliance: EOS Data and Information Services

Theme(s): Earth Science

Msn/Prgm: GeoBrain[B16]

Description: This project will mobilize NASA EOS data and information through Web service and knowledge-management technologies for higher education teaching and research. The technologies, based on geo-object and geo-tree concepts, will be implemented in a standard-compliant, open, distributed, three-tier Web information system called GeoBrain. The system will make petabytes of NASA EOS data and information, especially those in ECS data pools, easily accessible to higher education users. The project will form a NASA EOS Higher Education Alliance (NEHEA), consisting of the development team from four universities and Earth science educators from nine universities, to undertake the development, maintenance, and operation of the GeoBrain. The system, developed by the end-user community for the community, will bridge the gap between EOSDIS data archives and end users. NEHEA members will incorporate the data-enhanced environment into their existing courses and ongoing research and will develop new courses for taking advantage of the environment.

Lead: Ms. Meixia Deng, George Mason University, Fairfax, VA 22030-4444. E-mail: mdeng@gmu.edu. Phone: 301-220-0525.

Primary URL: <http://geobrain.laits.gmu.edu>

Secondary

URL: <http://reason.laits.gmu.edu>

Scientist(s):	Ms. Donna Deng	George Mason University	Fairfax, VA
	Ms. Meixia Deng	George Mason University	Fairfax, VA
	Dr. Liping Di	George Mason University	Fairfax, VA
	Dr. Fang Qiu	University of Texas at Dallas	Richardson, TX

Partner(s):	Dr. Wenli Yang	George Mason University	Fairfax, VA		
	Dr. George Young	Pennsylvania State University	University Park, PA		
	Mr. Peng Yue	George Mason University	Fairfax, VA		
	Dr. Genong Yy	George Mason University	Manassas, VA		
	Dr. Peisheng Zhao	George Mason University	Fairfax, VA		
	City University of New York (CUNY) Lehman College	Bronx, NY			
	Northern Illinois University	DeKalb, IL			
	Pennsylvania State University	University Park, PA			
	University of Texas at Dallas	Richardson, TX			
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Jan 05	06 Jan 05	Federation of Earth Science Information Partners-14th ESIP Assembly—Washington, DC	0	200	0
30 Jan 05	30 Sep 05	George Mason University—Fairfax, VA	0	0	200
30 Jan 05	30 Sep 05	George Mason University—Fairfax, VA	200	6000	0
07 Mar 05	11 Mar 05	American Society for Photogrammetry and Remote Sensing 2005 Annual Conference—Baltimore, MD	0	800	0
04 Apr 05	30 Sep 05	Global Spatial Data Infrastructure—International Society	0	3200	0
03 May 05	03 May 05	George Mason University—Fairfax, VA	7	0	0
13 Jun 05	16 Jun 05	Federation of Earth Science Information Partners-15th ESIP Assembly—San Diego, CA	0	200	0
22 Jun 05	30 Sep 05	George Mason University—Fairfax, VA	7	300	1000
28 Jun 05	30 Jun 05	NASA's Earth Science Technology Conference 2005—College Park, MD	0	200	0
25 Jul 05	29 Jul 05	International Geoscience and Remote Sensing Symposium 2005—Seoul, South Korea	0	2100	0
03 Aug 05	07 Aug 05	Earth System Science Education in the 21st Century Annual Meeting 2005—Fairbanks, AK	40	270	0

A13. Navigator: Center for Astronomy Education

Theme(s): Astrophysics

Msn/Prgm: SST[B52], Navigator Program[B59]

Description: Over half of all astronomy instruction in the U.S. takes place in community colleges. Navigator's goal is to reach and impact more than a third of the Nation's 1, 200 community colleges within a 3-year period. The core of Navigator's impact will be achieved through the involvement of a national Educator Advisory Board and a series of lecture/tutorials focused on (1) techniques in astronomy, (2) tools and telescopes, and (3) the nature of light. The program will be rolled out through a series of teaching excellence workshops that will be enhanced by large national conferences devoted to improving the teaching of Astronomy 101 survey courses.

Lead: Ms. Rhonda Jones, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Rhonda.R.Jones@jpl.nasa.gov. Phone: 818-354-1562.Primary URL: <http://planetquest.jpl.nasa.gov>

Scientist(s):	Ms. Gina Brissenden Ms. Rhonda Jones Mr. Edward Prather Dr. Timothy Slater	University of Arizona NASA Jet Propulsion Laboratory University of Arizona University of Arizona	Tucson, AZ Pasadena, CA Tucson, AZ Tucson, AZ
Partner(s):	University of Arizona		Tucson, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
06 Nov 04	07 Nov 04	American Association of Physics Teachers Headquarters—College Park, MD	94	0	0
11 Dec 04	12 Dec 04	Marriott Hotel—San Francisco, CA	18	0	0
28 Jan 05	29 Jan 05	Harold Washington Community College—Chicago, IL	36	0	0
07 Mar 05	08 Mar 05	University of Arizona—Tucson, AZ	32	32	0
31 Mar 05	31 Mar 05	Dallas Convention center—Dallas, TX	0	31	0
01 Apr 05	01 Apr 05	Fairmont Hotel—Dallas, TX	0	14	0
08 Apr 05	08 Apr 05	Harvard University—Cambridge, MA	0	31	0
12 Apr 05	12 Apr 05	Boston University—Boston, MA	0	44	0
14 Apr 05	14 Apr 05	Vanderbilt University—Nashville, TN	0	39	0
15 Apr 05	15 Apr 05	Vanderbilt University—Nashville, TN	0	41	0
17 Apr 05	17 Apr 05	Marriott Hotel—Tampa, FL	0	29	0
30 Apr 05	30 Apr 05	Dallas Convention center—Dallas, TX	0	19	0
30 Apr 05	01 May 05	Shoreline Community College—Shoreline, WA	21	0	0
06 May 05	07 May 05	Iona College—New Rochelle, NY	18	0	0
21 May 05	22 May 05	Marriott Hotel—New Orleans, LA	14	0	0

28 May 05	31 May 05	University of Texas at Austin—Austin, TX	0	100	0
20 Jun 05	23 Jun 05	Royal Kona Resort—Kailua-Kona, HI	17	0	0
06 Jul 05	08 Jul 05	Montana State University—Bozeman, MT	13	18	0

Targeted Institution Research and Academic Infrastructure

A14. Employing Planetary Astronomy to Inspire Undergraduates in Southern California's Inland Empire

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: Our program is entitled Employing Planetary Astronomy to Inspire Undergraduates in Southern California's Inland Empire. Through this program, we have been working toward several goals. First, we have modernized the lectures and revamped the laboratory for the introductory astronomy class (Physics 103, Descriptive Astronomy), replaced old telescopes with 12 new computer-driven 8-inch Meade telescopes, and purchased a STARLAB for new labs. The telescopes and STARLAB are also be used for the new junior-level planetary science course (Physics 311) for liberal studies majors that we have developed as a new course. This class, called A Cosmic Perspective of Earth, is designed for teacher preparation and incorporates new standards set by the State of California for teacher preparation. Through this course, we will ultimately reach hundreds of teachers-in-training each year and equip them with a background in and excitement for astronomy that they can take to their classrooms upon graduation. The class was taught for the first time in spring 2006 and was extremely well received. We have also involved undergraduates through conducting research both during the school year and at the event at NASA Johnson Space Center as part of an exchange program during the summer. The undergraduate research students have conducted research equivalent to that done by a professional astronomer, including traveling to professional observatories (Lowell Observatory in Flagstaff, AZ) to take data of comets, asteroids, and Kuiper Belt Objects presenting results at professional meetings and coauthoring refereed journal articles. All students who have taken part in the project have traveled to Houston for summer internships at NASA's Johnson Space Center, and 70 percent have been coauthors on abstracts and/or journal articles. The effect on the students is profound, by their own accounts, both academically and personally.

Contact: Dr. Sue Lederer, California State University, San Bernardino, San Bernardino, CA 92407.

E-mail: slederer@csusb.edu. Phone: 909-537-3589.

Partner(s): NASA Johnson Space Center

Houston, TX

A15. Essex-Stevens Model: Access to Space Science Research Opportunities

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: This project was conceived as an Educational/Public Outreach (E/PO) project associated with the Principal Investigator's (PI's) primary research grant from NASA's Planetary Atmospheres Program. The main objective of the project is to invite student-faculty teams from community colleges to spend part of the summer participating in research projects related to space science. We specifically wanted to target institutions with a large student population from traditionally underrepresented population groups in the STEM fields (science, technology, engineering, and math). By involving faculty (and administration) in the program, we aimed for a goal that was more ambitious than just providing the students with summer research opportunities. We wanted the student-faculty teams to return to their home institutions and use their experience as a trigger for curriculum expansion and changes targeted toward a more indepth incorporation of the concepts of science and scientific research into the course and program offerings. We identified Essex County College (ECC) in Newark, NJ, as our first partner institution. ECC is a community college that serves a predominantly Hispanic and African American student population. Furthermore, many of the ECC students are the first in their family to pursue higher education beyond the high school level. The choice of ECC as our first partner institution was also a natural extension of earlier summer programs that involved the Light and Life Lab at the Stevens Institute of Technology (Professor K. Starnes, Lab Director, and Mr. Gus Lindquist, Project Specialist) and ECC students. In this context, it is worth mentioning that Mr. Gus Lindquist played a pivotal role both in initiating this program and in guiding and overseeing its implementation.

Lead: Dr. Kurt Becker, Stevens Institute of Technology, Hoboken, NJ 07030. E-mail: kbecker@stevens.edu. Phone: 201-216-5671.

Scientist(s): Dr. Robert Johnson

University of Virginia

Charlottesville, VA

Dr. Nadia Lvov

Essex County College

Newark, NJ

Partner(s): Essex County College

Hoboken, NJ

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Jan 05	18 Jan 05	Essex County College—Hoboken, NJ	17	0	0
18 Jan 05	18 Jan 05	Essex County College—Hoboken, NJ	26	0	0

A16. Exploring Astrobiology: A Penn State-University of Puerto Rico Initiative

Theme(s): Astrophysics

Msn/Prgm: SRT[B28], NAI[B62]

Description: The E/PO activity for the Trace Element Mobility proposal is to recruit undergraduate students (freshmen and sophomores) from Puerto Rico for a summer research program at Penn State University. Hispanics historically have been underrepresented in the sciences. By offering the opportunity to perform research at Penn State, we will be exposing students to some of the top faculty and labs in the country and broadening their training

as future scientists. At Penn State, we can also capitalize on existing student research programs, such as BRIE (Biogeochemical Research Initiative for Education) and SROP (Summer Research Opportunities Program), to create opportunities for dynamic interaction among peers and between students and faculty. Both PIs are women, and one PI is Hispanic American.

Lead: Dr. Susan Brantley, Pennsylvania State University, University Park, PA 16802. E-mail: brantley@geosc.psu.edu.
Phone: 814-865-1619.

Contact: Dr. Carmen Enid Martínez, Pennsylvania State University, University Park, PA 16802. E-mail: cem17@psu.edu.
Phone: 814—863-5394.

Scientist(s): Dr. Susan Brantley, Pennsylvania State University, University Park, PA
Dr. Brian Dempsey, Pennsylvania State University, University Park, PA
Dr. Timothy White, Pennsylvania State University, University Park, PA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
06 Jun 05	29 Jul 05	Pennsylvania State University— University Park, PA	3	0	0

A17. Graduate Space Science Education and Disturbed Solar Wind Effects on Earth's Environment

Theme(s): Heliophysics

Msn/Prgm: MI Initiative[B27], Wind[B83]

Description: With the support of the NASA Minority University and College Education and Research Partnership Initiative (MUCERPI) 2003 program, a master's degree program in applied physics with space science as a specialization area was initiated at Alabama A&M University (AAMU) and approved by the Graduate Council. Six graduate courses in space science were approved by the Curriculum and Standards Committee. Two tenure-track faculty positions were created, and the appointments of three adjunct professors were made. Three African-American graduate students (Ms. Fana Mulu, Ms. Kennesha Nettles, and Ms. Samaiyah Farid) were admitted to the program. Ms. Nettles, Ms. Mulu, and Ms. Farid participated in summer programs at Lawrence Livermore National Laboratory (LLNL). Ms. Mulu and Ms. Farid also attended the Center for Integrated Space Weather Modeling (CISM) summer school at Boston University (BU). Ms. Farid further participated in "Physics Emasondosondo" science outreach program in Johannesburg, South Africa, which was sponsored by the NSF and administered by Columbia University. Undergraduate space science major Mr. Shaka Suber participated in a summer program at NASA MSFC. Faculty and students presented papers at the AGU Fall Meeting, NSBP Conference, AGU Joint Assembly, AAS Meeting, Chicago 2004 Meeting, AGU Western Pacific Geophysics Meeting, ITCC Conference, IGARSS Conference, SPD Meeting, NTA Conference, and IAGA Conference. Advances in space research were made in the areas of solar-terrestrial physics (solar wind and coronal mass ejections, geomagnetic storms, thermospheric density fluctuations, and climatological effects of the Sun) and satellite fragmentation studies. Partnership collaboration efforts are continuing between AAMU and NASA MSFC, LLNL, BU, the Florida Institute of Technology, and the University of Alabama, Huntsville.

Lead: Dr. Arijun Tan, Alabama A&M University, Normal, AL 35762. E-mail: atan@aamu.edu. Phone: 256-372-8115.

Contact: Dr. Arijun Tan, Alabama A&M University, Normal, AL 35762. E-mail: atan@aamu.edu. Phone: 256-372-8115.

Primary URL: <http://optics.physics.aamu.edu/>

Scientist(s):	Dr. Ravindra Lal	Alabama A&M University	Normal, AL
	Dr. Arijun Tan	Alabama A&M University	Normal, AL

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	27 Jan 05	27 Jan 05	University of Alabama at Huntsville—Huntsville, AL	0	60	0
	16 Sep 05	16 Sep 05	Alabama A&M University—Normal, AL	0	250	0

A18. Initiative to Enhance Space Science Education and Research at Norfolk State University

Theme(s): Astrophysics

Msn/Prgrm: MI Initiative[B27], GLAST[B47], Swift[B57], ACCESS[B61]

Description: This project has four basic components: (1) academic development-the creation and development of a new minor in astronomy, (2) faculty and student research participation in the space sciences, (3) enhancement of astronomy education in the Hampton Roads area, and (4) public outreach. We continue our partnerships in education and research with the Goddard Space Flight Center (GSFC) and the Department of Astronomy at the University of Virginia (UVA), Charlottesville. Together with UVA astronomers and with large participation from the community (mainly through the Back Bay Amateur Astronomers), we are building a Rapid Response Robotic Telescope (RRRT) at Fan Mountain, VA. The observatory is being built with funds from Norfolk State University (NSU) and the National Science Foundation (Major Research Instrumentation grant-Astronomy) and manpower funded through this grant. The main research objective of the telescope will be the photometric and polarimetric study of Gamma-ray Burst-Optical Afterglows (GRB-OA). We are part of the ground observational networks (followup team) of the Swift and GLAST missions. In the summer of 2006, we held our fifth workshop on Topics in Modern Astronomy directed at high and middle school teachers, with speakers from GSFC, UVA, and NSU. We continue to teach astronomy courses to inservice teachers through our partnership with local school systems. We also continue to introduce new courses into our new minor in astronomy (started in fall 2004). The first course we offered was General Astronomy. We repeated this offering in the spring and fall of 2005, adding Observational Astronomy and Astrobiology in 2006. Introduction to Astrophysics will be offered in fall 2006. We

have NSU undergraduate students directly participating in our education outreach and observatory construction. The RRRT project is planned to be completed by December 2006.

Lead: Dr. Carlos Salgado, Norfolk State University, Norfolk, VA 23504. E-mail: salgado@jlab.org. Phone: 757-269-5829.

Contact: Dr. Steven Ackerman, University of Wisconsin-Madison, Madison, WI 53706. E-mail: stevea@ssec.wisc.edu. Phone: 608-263-3647.

Primary URL: <http://www.nsu.edu>

Partner(s): Back Bay Amateur Astronomers
NASA Goddard Space Flight Center
University of Virginia

Chesapeake, VA
Greenbelt, MD
Charlottesville, VA

A19. Living With a Star (LWS): Followup Program and School Visits

Theme(s): Heliophysics

Msn/Prgm: LWS/PO[B90]

Description: The Follow-up Institute was conducted to enhance STEM instruction with unique teaching tools and experiences that only NASA can provide and that are compelling to educators and students. The Institute was conducted at Goddard Space Flight Center and Cheyney University in Pennsylvania. The workshop content approach was to highlight science and mathematics as a platform to showcase and recognize ways to better deliver NASA's SEC engineering and scientific research to the education community. Participants were Star Partners that have been with the program for 2 years and were from math, science, engineering, and elementary education fields. The attendees came from across the country and worked with mainstream, underrepresented, and underserved groups. The event was conducted at a Historically Black Institution.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary

URL: <http://stp.gsfc.nasa.gov>

Scientist(s): Dr. Ayodele Aina
Dr. Evelina Felicite-Maurice
Mr. Mitchell Watkins

Cheyney University of Pennsylvania
NASA Goddard Space Flight Center
NASA Goddard Space Flight Center

Cheyney, PA
Greenbelt, MD
Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
26 Jul 05	31 Jul 05	Cheyney University of Pennsylvania— Cheyney, PA	54	3	0

A20. NASA Balloon Science Workshop

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: MARSSB[B39], CHIPS[B54], Ulysses[B71]

Description: The Mid-Atlantic Region Space Science Broker Program organized a NASA Balloon Science Workshop at Cornell University from August 1 to 2, 2005. We invited researchers from a variety of missions and areas of expertise to discuss opportunities for partnership with scientists representing minority-serving colleges and universities. The aim of this workshop was to build community among people interested in advancing university-based, diversity-enhanced research and education with high-altitude balloons. The organizers of this workshop also see scientific ballooning as an excellent point of entry for faculty at minority-serving institutions and smaller institutions to become directly involved in NASA scientific missions.

Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.
E-mail: lruberg@cet.edu. Phone: 304-243-2480.

Primary URL: <http://marssb.cet.edu>

Secondary

URL: <http://www.nasa.gov/vision/universe/stargalaxies/cream.html>

Scientist(s): Dr. Shermane Austin
Dr. Louis Barbier
Dr. Leon Johnson
Dr. Michael Kelley
Dr. David Pierce
Dr. William Waller
Dr. Donald Walter
Partner(s): City University of New York (CUNY) Medgar Evers College
Cornell University
NASA Wallops Flight Facility
New England Space Science Initiative in Education (NESSIE)
Tufts University

City University of New York (CUNY)
Medgar Evers College
NASA Goddard Space Flight Center
City University of New York (CUNY) Medgar
Evers College
Cornell University
University of California, Los Angeles
Tufts University
South Carolina State University

Brooklyn, NY
Greenbelt, MD

Brooklyn, NY
Ithaca, NY
Los Angeles, CA
Medford, MA
Orangeburg, SC
Brooklyn, NY
Ithaca, NY
Wallops Island, VA
Boston, MA
Medford, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Aug 05	02 Aug 05	NASA Balloon Science Workshop: Fostering New Research Partnerships—Ithaca, NY	35	0	2000

A21. Navigator: Research Experiences for Minorities

Theme(s): Astrophysics
 Msn/Prgm: Navigator Program[B59]
 Description: Navigator is in its final year of a pilot summer research program targeting students from Tennessee State University. The accredited 8-week summer research course, Research in Astronomy, is designed to expose undergraduate math, science, and engineering students to advanced science research and to NASA career opportunities and latest technical findings. In addition, Navigator is involved in the expansion of a successful California research program for community college students known as the Consortium for Undergraduate Research Experiences (CURE). A modest Navigator investment supported a winning NSF grant for \$500, 000, which will allow 70 students to be mentored by scientists and others over the next 4 years.

Lead: Ms. Rhonda Jones, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Rhonda.R.Jones@jpl.nasa.gov. Phone: 818-354-1562.

Primary URL: <http://planetquest.jpl.nasa.gov>
 Secondary URL: <http://www.tnstate.edu/>
 Scientist(s): Mr. Steve Gillam NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
26 Apr 05	27 Apr 05	Northern Arizona University—Flagstaff, AZ	0	28	0
31 May 05	29 Jul 05	Tennessee State University—Nashville, TN	11	0	0

A22. New Directions in Astronomy and Astrobiology

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: MI Initiative[B27], SERCH B/F[B41]
 Description: The NASA MUCERPI 2003 award to South Carolina State University (SCSU), New Directions in Astronomy and Astrobiology, has expanded the University's involvement in the fields of astronomy and astrobiology through faculty research, student research, curriculum enhancement, and outreach to the K–12 community. Faculty research has been enhanced through new partnerships with scientists at the Goddard Center for Astrobiology, NASA's SOFIA mission, Lawrence Livermore National Laboratory, and the Robotically Controlled Telescope Consortium. Student summer internships at SCSU have been provided to students from SCSU as well as other Minority Institutions (MIs), such as Elizabeth City State University and North Carolina A&T. SCSU has partnered with others MIs, such as Tennessee State University and Bennett College, through various activities in astrobiology. SCSU has collaborated with other MUCERPI 2003 awardees Medgar Evers College, Fisk/Vanderbilt University, Norfolk State University, and the University of Houston-Downtown. On the campus of SCSU, a new astronomy minor has been introduced, as well as an astrophysics option for physics majors. New courses have been added to the curriculum in astrophysics, astrobiology, and scientific image analysis, while existing Earth and space science courses have been enhanced. Through this award, SCSU has partnered with all four of the NASA Explorer Schools in the State, in addition to offering teacher workshops and summer courses in space science for junior high and high school teachers.

Lead: Dr. Donald Walter, South Carolina State University, Orangeburg, SC 29117. E-mail: dkw@physics.scsu.edu. Phone: 803-533-3773.

Contact: Dr. Donald Walter, South Carolina State University, Orangeburg, SC 29117. E-mail: dkw@physics.scsu.edu. Phone: 803-533-3773.

Partner(s): Bennett College Greensboro, NC
 Lawrence Livermore National Laboratory Livermore, CA
 NASA Goddard Space Flight Center Greenbelt, MD
 Orangeburg-Calhoun Technical College Orangeburg, SC
 Pisgah Astronomical Research Institute Rosman, NC
 Planetary Science Institute Tucson, AZ
 South Carolina Governor's School for Science and Mathematics Hartsville, SC
 Talladega College Talladega, AL

A23. New York City Research Initiative (NYCRI): 2005 Summer Research Institute

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: NYCRI[B21]
 Description: The primary goal of the NYCRI is to increase the number of students in the Science, Technology, Engineering, and Mathematics (STEM) pipeline by providing research and classroom experiences as only NASA can. Existing NASA student and faculty internship programs, as well as higher education, informal education, and other government agency (such as the NSF, U.S. Department of Education [USDE], NOAA, and Department of Defense [DOD]) resources were used to formulate, implement, and evaluate the NYCRI 2005 Summer Research Institute Component. Thirty teams of high school and college students and faculty worked alongside graduate students and the Principal Investigators of NASA research projects at 12 universities within a 50-mile radius of New York City (NY, NJ, and CT) and at the NASA Goddard Institute for Space Studies (GISS). Summer enrichment experiences included weekly content and research seminars, team oral research reports, visits to various research laboratories and informal education institutions, participation in local and national research conferences, and a final research summit. Existing NASA, NSF, and NYCRI partner university programs supported student and faculty stipends. Partners included NASA (lead), NSF, New York City Department of Education, New York State Department of Education, and 12 colleges (within NY, NJ, and CT, with the City University of New York as the

Lead: institution), as well as informal education institutions, such as the American Museum of Natural History, Hayden Planetarium, Brookhaven National Laboratories, the Wildlife Conservatory Society, and various science centers. NYCRI participants included 12 high school students, 13 undergraduates, 12 graduate students, 2 postdocs, 7 high school teachers, 45 parents, and 25 university/NASA mentors and scientists, as well as 10 undergraduates working on related projects on partner campuses.

Lead: Dr. Leon Johnson, City University of New York (CUNY) Medgar Evers College, Brooklyn, NY 11225.
E-mail: lpjohnson99@cswebmail.com. Phone: 718-270-6454.

Primary URL: <http://education.gsfc.nasa.gov/nycri>

Scientist(s):	Dr. Frank Scalzo	NASA Goddard Institute for Space Studies	New York, NY
Partner(s):	American Museum of Natural History		New York, NY
	Brookhaven National Laboratory		Upton, NY
	City University of New York (CUNY) LaGuardia Community College		Long Island, NY
	City University of New York (CUNY) Medgar Evers College		Brooklyn, NY
	City University of New York (CUNY) Queensborough Community College		Bayside, NY
	CUNY City College of New York		New York, NY
	CUNY Hunter College		New York, NY
	Liberty Science Center		Jersey City, NJ
	Minority University-Space Interdisciplinary Network (MU-SPIN)		Greenbelt, MD
	NASA Goddard Institute for Space Studies		New York, NY
	NASA Goddard Space Flight Center		Greenbelt, MD
	New Jersey Institute of Technology		Newark, NJ
	Rutgers University		Piscataway, NJ
	Southern Connecticut State University		New Haven, CT
	State University of New York (SUNY), Stony Brook		Stony Brook, NY
	Stevens Institute of Technology		Hoboken, NJ

A24. New York City Research Initiative (NYCRI): Academic Year Component

Theme(s): Heliophysics, Planetary

Msn/Prgm: NYCRI[B21]

Description: NYCRI college faculty and scientists at Medgar Evers College, Queensborough Community College, and NASA GISS formulated and implemented NASA research-based learning units in existing science, technology, engineering, and mathematics courses.

Lead: Dr. Leon Johnson, City University of New York (CUNY) Medgar Evers College, Brooklyn, NY 11225.
E-mail: lpjohnson99@cswebmail.com. Phone: 718-270-6454.

Primary URL: <http://education.gsfc.nasa.gov/nycri>

A25. New York City Research Initiative (NYCRI): Enrichment Experience at the Hayden Planetarium

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NYCRI[B21]

Description: The New York City Research Initiative (NYCRI) participants attended an event at the Hayden Planetarium of the American Museum of Natural History. This activity included an exciting presentation given by former NASA astronaut Rusty Schweigert on "Mediating the Potential Hazards of Near Earth Objects and Near Earth Asteroids." Also, Dr. Neil deGrasse Tyson, Director of Hayden, addressed the NYCRI participants.

Contact: Ms. Fulvia Jordan, City University of New York (CUNY) Medgar Evers College, Brooklyn, NY 11225. E-mail: fjordan@mec.cuny.edu.

Primary URL: <http://education.gsfc.nasa.gov/nycri>

Scientist(s):	Dr. Neil Tyson	American Museum of Natural History	New York, NY
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Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Aug 05	16 Aug 05	American Museum of Natural History— New York, NY	223	0	0

A26. New York City Research Initiative (NYCRI): Final Research Conference

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NYCRI[B21]

Description: Final NYCRI Research Summit for NASA NYCRI and NSF Louis Stokes Alliance for Minority Participation (LSAMP) student researchers, college mentors, and NASA scientists in the tristate area (NY, CT, NJ). These student researchers included high school students, undergraduates, graduates, and postdocs.

Lead: Dr. Siva Thangam, Stevens Institute of Technology, Hoboken, NJ 07030. E-mail: sthangam@stevens-tech.edu.
Phone: 201-216-5558.

Primary URL: <http://education.gsfc.nasa.gov/nycri>

Scientist(s):	Dr. Leon Johnson	City University of New York (CUNY) Medgar Evers College	Brooklyn, NY New York, NY
Partner(s):	Dr. Frank Scalzo	NASA Goddard Institute for Space Studies	New York, NY
	American Museum of Natural History		Upton, NY
	Brookhaven National Laboratory		Long Island, NY
	City University of New York (CUNY) LaGuardia Community College		Brooklyn, NY
	City University of New York (CUNY) Medgar Evers College		

City University of New York (CUNY) Queensborough Community College
 CUNY City College of New York
 CUNY Hunter College
 NASA Goddard Institute for Space Studies
 NASA Goddard Space Flight Center
 NASA Headquarters
 New Jersey Institute of Technology
 Rutgers University
 Southern Connecticut State University
 State University of New York (SUNY) Stony Brook
 Stevens Institute of Technology

Bayside, NY
 New York, NY
 New York, NY
 New York, NY
 Greenbelt, MD
 Washington, DC
 Newark, NJ
 Piscataway, NJ
 New Haven, CT
 Stony Brook, NY
 Hoboken, NJ

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
29 Jun 05	23 Aug 05	Stevens Institute of Technology—Hoboken, NJ	638	0	0

A27. New York City Space Science Research Alliance—Phase II

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: The New York City Space Science Research Alliance is anchored by the City University of New York, the Hayden Planetarium of the American Museum of Natural History, and the NASA Goddard Space Flight Center. A multicampus research center and a "virtual" Department of Space Science have been created in New York City so that underrepresented undergraduate students and faculty can become involved in NASA space science research and education projects. For the 2 years of Phase II, the Alliance has (1) created the Research Articulation Program that supports junior faculty in initiating space science research with four faculty members (three from community colleges) (2) recruited 12 CUNY faculty members to attend Chicago 2004 to seek collaborations on space science missions and research (3) supported faculty to attend a space hardware workshop, computational science workshops, NASA balloon workshop, and national and international conferences (4) assisted faculty in the mentoring of over 12 high school students, 60 undergraduates, and 6 graduates in summer research experience on CUNY campuses, 2 at GSFC, 2 at GISS, 2 at Tennessee State University/JPL, and 6 at the Astrophysics Department of the Hayden Planetarium (5) assisted faculty in the mentoring of over 40 undergraduates and 6 graduate students in academic year research on CUNY campuses (6) collaborated in the establishment of the Medgar Evers College High Altitude Balloon Project with launches in Vermont, New York State, Iowa, and Montana, carrying students' scientific payloads and (7) supported 16 faculty members and 2 student presentations at national conferences, 12 journal publications, 1 published lab manual, and 8 International Astronomical Union (IAU) Minor Planet Center publications.

Lead: Dr. Leon Johnson, City University of New York (CUNY) Medgar Evers College, Brooklyn, NY 11225.

E-mail: lpjohnson99@cswebmail.com. Phone: 718-270-6454.

Contact: Dr. Leon Johnson, City University of New York (CUNY) Medgar Evers College, Brooklyn, NY 11225.

E-mail: lpjohnson99@cswebmail.com. Phone: 718-270-6454.

Primary URL: <http://nrts.mec.cuny.edu/nycssra>

Secondary

URL: <http://nrts.mec.cuny.edu/mecsat/>

Scientist(s): Dr. Kwesi Amoa

City University of New York (CUNY)
 Medgar Evers College

Brooklyn, NY

Dr. Shermane Austin

City University of New York (CUNY) Medgar
 Evers College

Brooklyn, NY

Dr. Barbara Carlson

NASA Goddard Institute for Space Studies

New York, NY

Dr. Tak Cheung

City University of New York (CUNY)

Queensborough Community College

Bayside, NY

Dr. Donald Cotten

City University of New York (CUNY)

Queensborough Community College

Bayside, NY

Ms. Honora Dash

John Dewey High School

Brooklyn, NY

Mr. Bart Estes

Holyoke Community College

Holyoke, MA

Dr. John Flowers

City University of New York (CUNY) Medgar
 Evers College

Brooklyn, NY

Mr. Barry Fried

John Dewey High School

Brooklyn, NY

Dr. James Frost

City University of New York (CUNY) LaGuardia
 Community College

Long Island, NY

Dr. Matthew Fulakeza

NASA Goddard Institute for Space Studies

New York, NY

Dr. Steve Greenbaum

CUNY Hunter College

New York, NY

Dr. William Hiscock

Montana State University

Bozeman, MT

Dr. Leon Johnson

City University of New York (CUNY) Medgar
 Evers College

Brooklyn, NY

Dr. Sheldon Kaufman

City University of New York (CUNY)

Queensborough Community College

Bayside, NY

Ms. Sheri Klug

Arizona State University

Tempe, AZ

Dr. Charles Liu

American Museum of Natural History

New York, NY

Dr. Paul Marchese	City University of New York (CUNY) Queensborough Community College	Bayside, NY
Mr. Tim Paglione	York College	Jamaica, NY
Mr. Irving Robbins	College of Staten Island	Staten Island, NY
Mr. Keith Rowan	College of Staten Island	Staten Island, NY
Dr. Elizabeth Rudolph	CUNY City College of New York	New York, NY
Dr. Carlos Salgado	Norfolk State University	Norfolk, VA
Dr. Willard Smith	Tennessee State University	Nashville, TN
Dr. Martin Spergel	York College	Jamaica, NY
Dr. Jeffrey Steiner	CUNY City College of New York	New York, NY
Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
Dr. Winfield Sylvester	City University of New York (CUNY) Medgar Evers College	Brooklyn, NY
Mr. George Tremberger	City University of New York (CUNY) Queensborough Community College	Bayside, NY
Dr. Shana Tribiano	CUNY Borough of Manhattan Community College	New York, NY
Dr. Neil Tyson	American Museum of Natural History	New York, NY
Dr. Donald Walter	South Carolina State University	Orangeburg, SC
Dr. Esther Zirbel	College of Staten Island	Staten Island, NY

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 May 05	American Museum of Natural History— New York, NY	30	30	0
01 Oct 04	31 May 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	22	0	0
01 Oct 04	31 May 05	City University of New York (CUNY) Queensborough Community College— Bayside, NY	5	0	0
01 Oct 04	31 May 05	College of Staten Island—Staten Island, NY	3	0	0
01 Oct 04	31 May 05	CUNY Borough of Manhattan Community College New York—NY,	6	0	0
01 Oct 04	31 May 05	York College—Jamaica, NY	4	250	0
01 Oct 04	30 Sep 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	7	0	0
04 Oct 04	27 Jun 05	College of Staten Island—Staten Island, NY	1200	1700	0
08 Oct 04	09 Oct 04	Norfolk State University—Norfolk, VA	4	12	0
27 Oct 04	27 Oct 04	York College—Jamaica—NY	5	200	0
18 Nov 04	18 Nov 04	City University of New York (CUNY) Queensborough Community College— Bayside, NY	2	50	0
03 Jan 05	01 May 05	City University of New York (CUNY) LaGuardia Community College—Long Island, NY	3	0	0
03 Jan 05	31 May 05	CUNY Borough of Manhattan Community College New York—NY,	31	0	0
01 Feb 05	31 May 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	21	0	0
01 Feb 05	31 May 05	City University of New York (CUNY) Queensborough Community College— Bayside, NY	55	0	0
01 Feb 05	31 May 05	York College—Jamaica, NY	2	0	0
01 Feb 05	31 Jul 05	CUNY City College of New York—New York, NY	32	0	0
01 Feb 05	30 Sep 05	CUNY Borough of Manhattan Community College New York—NY,	3	0	0
12 Mar 05	12 Mar 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	173	150	0
01 Apr 05	01 Apr 05	York College—Jamaica, NY	66	0	0
05 May 05	05 May 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	104	0	0
07 May 05	07 May 05	York College—Jamaica, NY	0	40	0
23 May 05	27 May 05	Kyoto University—Kyoto, Japan	1	0	0
23 May 05	31 Jul 05	Tennessee State University—Nashville, TN	6	0	0
25 May 05	05 Aug 05	NASA Glenn Research Center—Cleveland, OH	1	0	0
06 Jun 05	12 Aug 05	American Museum of Natural History— New York, NY	6	0	0
06 Jun 05	12 Aug 05	City University of New York (CUNY) LaGuardia Community College—Long Island, NY	9	0	0

06 Jun 05	12 Aug 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	17	0	0
06 Jun 05	12 Aug 05	City University of New York (CUNY) Queensborough Community College— Bayside, NY	9	0	0
06 Jun 05	12 Aug 05	CUNY City College of New York—New York, NY	9	0	0
06 Jun 05	12 Aug 05	CUNY Hunter College—New York, NY	12	0	0
06 Jun 05	12 Aug 05	NASA Goddard Institute for Space Studies— New York, NY	5	0	0
29 Jun 05	05 Aug 05	City University of New York (CUNY) Medgar Evers College—Brooklyn, NY	22	0	0
01 Jul 05	03 Jul 05	University of Nebraska at Omaha—Omaha, NE	6	0	0
15 Jul 05	15 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	2	0	0
18 Jul 05	18 Jul 05	Arizona State University—Tempe, AZ	2	0	0
31 Jul 05	04 Aug 05	Optics & Photonics 2005—San Diego, CA	5	0	0
01 Aug 05	02 Aug 05	Cornell University—Ithaca, NY	11	0	0
08 Aug 05	10 Aug 05	Montana State University—Bozeman, MT	6	0	0
14 Sep 05	14 Sep 05	York College—Jamaica, NY	0	50	0

A28. Partnership for a Sustainable Space Science Program at the University of the District of Columbia in Collaboration with the Catholic University of America

Theme(s): Heliophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: The aim of the project is to develop a space science program/curriculum primarily targeted at minority populations at various levels of the academic enterprise and to enhance and facilitate professional development for faculty and students in space science research and education. The project consists of four major thrusts: (1) Pre-College Initiatives, (2) Teachers of Physical Science Initiative, (3) Faculty Development Program, and (4) Long-Term Program Sustainability. The Pre-College Initiatives consist of space science/astronomy enrichment programs offered throughout the academic year to middle and high school students. A 10-week program consisting of lectures, field trips, and demonstrations supplemented with hands-on activities was provided to middle school students during the fall and spring semesters. The High School Space Science Summer Academy curriculum focuses attention on space by exploring issues related to the solar system and the universe beyond. Classroom presentations are augmented with a field trip. The Pre-College Initiatives are targeted at middle and high school students with the broad goal of creating a pipeline to feed and support the B.S. programs in engineering physics, physics, and engineering. The curricula are tailored around the strategic goals/missions of NASA Space Mission Directorate. The programs are meant to inspire and stimulate students' interest in space science. A new syllabus for introduction to astronomy has been developed for a course that was taught in spring 2006 to Early College students of the Friendship Edison Charter School. Students who successfully complete the course will earn university credits toward college degrees at the University of the District of Columbia (UDC). This course is intended to provide a description of modern astronomy, including our solar system, stars, galaxies, and the structure of the universe. A physical science course with a focus on astronomy has been developed to equip preservice education students with skills and materials to engage middle school students in our public schools in space science-related classes. The initial course, held at the Catholic University of America (CUA), has been replicated at the University of the District of Columbia. The sustainability of a space science program at UDC will be assured through the implementation of a bachelor of science degree in engineering physics. The Science Educators' Initiative was targeted primarily at preservice K–8 teachers. The goal is to stimulate interest in the physical sciences among minority students drawn primarily from the UDC Department of Education and incoming CUA General Education freshmen. The Teachers of Physical Science (TOPS!) course developed at CUA was offered for the second time in the spring of 2005 with support from this grant. The course is titled Sun and Earth-Concepts and Connections. The course is targeted at non-science majors and preservice teachers. The course as presently constituted is open to both UDC and CUA students. However, an adaptation of this course, built on astronomy, will be offered to UDC preservice K–8 teachers in fall 2006. In addition, we are hoping that the course will be incorporated into the General Education requirements at UDC. There are plans to develop an inservice teachers space science program. A 5- or 6-week seminar will be provided to inservice teachers during the summer. However, a funding request from the DC Space Grant Consortium to support the offering of this course was unsuccessful. The curriculum will be adapted from the CUA TOPS! 2 and 3 curricula currently under development. The program will exploit the broad appeal of solar physics and the wealth of data on Sun-Earth connections and will draw on solar physics research centers in the local area in a cooperative effort to expose teachers of science to the excitement of research with sufficient contextual skills to teach, inspire, and inform the next generations. Among the long-term goals of the project are enhancing the participation of UDC in space science and facilitating and fostering the development of enduring links among the project partners and the space science research community. The overarching objective is to inspire the next generations of explorers and sustain a pipeline of future space scientists and engineers. The Dean of the UDC School of Engineering and Applied Sciences (SEAS) has given approval for the development of a curriculum in engineering physics with a core in space science. The new faculty in space science, in collaboration with engineering and physics faculty, will develop a curriculum in engineering physics for University Board approval. Once this process is completed, a B.S. degree in engineering physics will be offered at UDC. One of the challenges in sustaining

a program in physics or engineering physics at UDC is student recruitment. We hope to alleviate this problem through our alliance with the Friendship Edison Collegiate Academy. At the end of the grant period, this program will be incorporated into the University's Science and Engineering Center offerings. The Center is supported by the University and Foundations funds. Efforts are under way to seek funds to sustain all these programs at the conclusion of the grant. One such effort is targeted at seeking additional appropriation from the DC government to support our flagship precollege program, the Saturday Academy. The precollege components of our initiatives will be assumed by the UDC Science and Engineering Center. In addition, we are working with the UDC Science and Engineering Center to obtain funding from foundations that support precollege programs. The following major outcomes have been attained: the enrollment of 50 middle school students in the spring 2005 and fall 2006 sessions, the enrollment of 25 high school students in the summer academy, the presentation of the second TOPS! course to K–8 preservice General Education students, the formalization of a partnership arrangement with the Friendship Edison Schools System, attendance at the AAS Annual Meeting, the publication of articles in scientific journals, the development of syllabi in astronomy for preservice teachers of science and Early College high school students, and the development of faculty through monthly colloquia at the CUA physics department.

Lead: Dr. Abiose Adebayo, University of the District of Columbia, Washington, DC 20008. E-mail: aadebayo@udc.edu.
 Contact: Dr. Abiose Adebayo, University of the District of Columbia, Washington, DC 20008. E-mail: aadebayo@udc.edu.
 Partner(s): Catholic University of America Washington, DC
 NASA Goddard Space Flight Center Greenbelt, MD
 NASA Headquarters Office of Education Washington, DC

A29. Partnerships in Astronomy and Astrophysics Education and Research at Southern University

Theme(s): Heliophysics, Astrophysics
 Msn/Prgm: MI Initiative[B27]
 Description: Southern University-Baton Rouge, the main campus of the largest Historically Black College and University (HBCU) system in the country, continues its ongoing successful educational and research partnerships with the Smithsonian Astrophysical Observatory (SAO) in Cambridge, MA, and neighboring Louisiana State University (LSU) in Baton Rouge, LA. These multifaceted partnerships are contributing to a major revitalization of the academic program in astronomy and astrophysics at Southern University. With SAO, we continue Southern student involvement in ongoing SOHO/UVCS research activities and seek to become a formal participant in the planning of future space missions, such as those associated with NASA's Living With a Star (LWS) program. With LSU, Southern continues its involvement in the development of new detector technologies for the next generation of imaging instruments for high-energy astrophysics. In the area of student training, a particular highlight over the past academic year (2004–05) was the inauguration of a new joint "capstone" venture (the La ACES student-ballooning project) between LSU and Southern to train students in laboratory techniques and experimental methods relevant to space science. Both collaborative partnership projects involve regular visits by LSU and SAO scientists to the Southern campus in Baton Rouge to teach and mentor students, as well as reciprocal visits by qualified Southern students to LSU and SAO to work on joint research activities. Southern students and faculty also continue their involvement in the educational and public-outreach activities associated with the Highland Road Park Observatory in Baton Rouge, in whose operation Southern University is in the process of becoming a formal partner. Finally, the ongoing impact of the recent hurricanes Katrina and Rita on our students and program at Southern continue to be assessed. The resources provided under this grant have enabled us to support a number of displaced students.

Lead: Dr. J. Gregory Stacy, Southern University and A&M College, Baton Rouge, LA 70813.
 E-mail: gstacy@phys.subr.edu. Phone: 225-771-2831.
 Contact: Dr. J. Gregory Stacy, Southern University and A&M College, Baton Rouge, LA 70813.
 E-mail: gstacy@phys.subr.edu. Phone: 225-771-2831.

Primary URL: <http://www.phys.subr.edu>

Secondary

URL: <http://cfa-www.harvard.edu/uvcs/SUBR/>

Partner(s): Harvard-Smithsonian Center for Astrophysics
 Louisiana State University
 NASA Headquarters Office of Education

Cambridge, MA
 Baton Rouge, LA
 Washington, DC

A30. Space Science Minor at Hampton University

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: MI Initiative[B27]
 Description: Hampton University's minor in Space, Earth, and Atmospheric Sciences (SEAS) is offered for students with interests in NASA's scientific endeavors. Students completing the SEAS minor accrue 18 hours of credit in courses taught by faculty with expertise in these fields. By preparing students for graduate studies and future careers in these areas, we hope to achieve greater diversity in our next generation of scientists and explorers. All of the courses are approved technical electives for students with majors in biology, chemistry, computer science, marine science, mathematics, and physics, whether they are enrolled in the SEAS minor or not. Several courses also are offered to satisfy basic science requirements for all Hampton University students. Thus the program is not exclusively directed toward students in the sciences and related fields, but rather seeks to reach the largest possible number of students with a wide variety of interests and career goals.

Lead: Dr. Ali Omar, Hampton University, Hampton, VA 23668. E-mail: ali.omar@hamptonu.edu. Phone: 757-727-5127.

A31. Space Science Workshops for Minority-Serving Institutions

Theme(s): Planetary
 Msn/Prgm: DePaul B/F[B37]
 Description: The DePaul Space Science Center conducts a series of data-/image-analysis workshops for faculty and students at minority-serving institutions in the Chicago area. The purpose of this series of workshops is to expose participants to tools used by NASA scientists, in this case Interactive Data Language (IDL), to analyze information captured by NASA missions and telescopes. These faculty and students will eventually be able to view and manipulate data collected from the Lunar Reconnaissance Orbiter mission under the guidance of the project lead.

Lead: Dr. Carolyn Narasimhan, DePaul University, Chicago, IL 60604. E-mail: cnarasim@depaul.edu. Phone: 773-325-1854.

Scientist(s):	Dr. Shermane Austin	City University of New York (CUNY) Medgar Evers College	Brooklyn, NY
	Dr. Bernhard Beck-Winchatz	DePaul University	Chicago, IL
	Ms. Tamra Gentry	DePaul University	Chicago, IL
	Dr. Leon Johnson	City University of New York (CUNY) Medgar Evers College	Brooklyn, NY
	Dr. Carolyn Narasimhan	DePaul University	Chicago, IL
	Dr. Donald Walter	South Carolina State University	Orangeburg, SC

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Jun 05	16 Jun 05	DePaul University—Chicago, IL	9	0	0

A32. Special-Needs Initiative

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: ASO[B33], SSE[B34], SEU[B35], SECEF[B36], DePaul B/F[B37], MARSSB[B39], NESSIE B/F[B40], SERCH B/F[B41], SSI B/F[B42], S2N2 B/F[B43]
 Description: SERCH has been working with educators and experts from exceptional classroom settings and organizations to identify what kinds of educational materials they need and what educational products will work best for their students. From our discussions and work with these educators and experts, it is clear that there is a need to modify and/or adapt existing educational materials and to encourage NASA product developers to include educational methods for involving the exceptional student population. To answer this dilemma, SERCH has been working closely with special-needs educators, experts, and NASA education product developers to implement more effective ways for ALL students to share in the excitement of NASA space science missions.

Lead: Dr. Cassandra Runyon, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
 E-mail: runyonc@cofc.edu. Phone: 843-953-8279.

Contact: Ms. Kathryn Guimond, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
 E-mail: serch@cofc.edu. Phone: 888-873-9475.

Primary URL: <http://serch.cofc.edu/special/overview.htm>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	College of Charleston—Charleston, SC	270	0	0

A33. Students United with NASA Becoming Enthusiastic About Math and Science (SUNBEAMS)

Theme(s): Heliophysics
 Msn/Prgm: LWS/PO[B90]
 Description: SUNBEAMS is an exciting and successful educational partnership between NASA Goddard Space Flight Center (GSFC) and the District of Columbia Public Schools (DCPS). It continues to evolve as a model urban intervention program for sixth-grade teachers and students that empowers teachers and inspires students with the process and excitement of space science and technology. Local teachers of sixth-grade math and science are invited to come to Goddard for 5-week paid internships during the summer. Each of them is paired with a mentor from the Goddard scientific or technical staff. The teachers work with mentors in their professional work, much the same way that summer students do. In addition, the teachers are responsible for developing lesson plans that they pilot at their schools and post on the SUNBEAMS Web site. During the following school year, each SUNBEAMS teacher brings a class of up to 30 students to Goddard for a full week of immersion in math and science. The students also develop Web pages describing their experiences. After their week at Goddard, the students plan a Family Night at their school. The program for the evening is to share with their families and other members of their community what they have learned and done. Goddard mentors are major participants. For more information, see the SUNBEAMS Web site at <http://space.gsfc.nasa.gov/sunbeams>.

Lead: Ms. Sarah Brown, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: sbrown@stars.gsfc.nasa.gov. Phone: 301-286-4558.

Primary URL: <http://space.gsfc.nasa.gov/sunbeams>

Secondary URL:

URL: <http://stargazers2gsfc.nasa.gov>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Jul 05	12 Aug 05	NASA Goddard Space Flight Center—Greenbelt, MD	47	2	0

A34. Synergetic Education and Research for Equipping NASA Space Scientists and Engineers

Theme(s): Astrophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: The Synergetic Education and Research in Enabling NASA-Centered Academic Development of Engineers and Space-scientists (SERENADES) Laboratory at California State University Los Angeles (CSULA) has been established to develop an education pipeline in space science-related education and research. In the second year (2005), the SERENADES Laboratory endeavored to continue the preparation of students through the education pipeline established based on the MUCERPI program. In Year 2, through the partnership of this program, two more PCC students have been prepared, transferred to CSULA, and now work in the SERENADES Laboratory. More than 20 students have benefited from the interdisciplinary training classes, as well as workshops offered by the SERENADES Laboratory. All of the nine SERENADES graduates have either been hired by JPL or the local aerospace industry or admitted to graduate school. Collaborative research efforts have been made among the Co-PIs, student assistants, and inservice teachers in the areas of JWST real-time system design, astronomical image processing, and astrophysical studies. As an outcome, more than 10 papers have been published, and more than 30 presentations have been given in technical conferences and outreach/open house events cumulatively. Two participating inservice teachers are delivering their research outcomes and the instructional software tools to the curricula of astronomy and physics in the local school districts. The SERENADES Laboratory continues to sponsor the NCLR Escalera Project, which allows Hispanic students from Garfield High School to participate in SERENADES research in summer 2005. In addition, one newly proposed course is under development to leverage the research result of real-time systems from the SERENADES Laboratory to the undergraduate curriculum.

Lead: Dr. Charles Liu, California State University, Los Angeles, Los Angeles, CA 90032. E-mail: cliu@calstatela.edu. Phone: 323-343-5802.

Contact: Dr. Charles Liu, California State University, Los Angeles, Los Angeles, CA 90032. E-mail: cliu@calstatela.edu. Phone: 323-343-5802.

Primary URL: <http://www.calstatela.edu/academic/ecst/serenades/>

Partner(s): NASA Headquarters Office of Education
Pasadena City College
University of Southern California

Washington, DC
Pasadena, CA
Los Angeles, CA

A35. Toward a Comprehensive Space Science Program at Fisk University: Curriculum Development, Research Partnerships, and Outreach Activities

Theme(s): Astrophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: The Fisk-Vanderbilt NASA Astronomy Roadshow consists primarily of a portable, inflatable StarLab planetarium, inside which we can project images and representations of the local night sky onto its interior. The facility was purchased using a NASA MUCERPI grant titled "Toward a Comprehensive Space Science Program at Fisk University (PI: Arnold Burger at Fisk University)". The outreach component of our program is centered on taking this mobile planetarium to schools, community centers, and public education institutions in and around Nashville, as well as across Tennessee. Some 20–25 students can be accommodated inside the planetarium during the presentation of one demonstration/show. The primary educational concepts of the planetarium involve introducing the participants to basic yet fundamental principles governing the Sun-Earth-Moon system, the planets, and the stars in our galaxy. Our mission goal is to bring an introduction of physics and astronomy to school-aged children and the community while developing formal, long-term partnerships with community centers such as local YMCA institutes and Nashville's own Adventure Science Center. Our planetarium outreach program directly responds to the challenges of NASA's E/PO strategic goals. It is designed for a broad-based, targeted public understanding of science (physics and astronomy), with foundations in place to include awareness and training for other education providers such as schoolteachers and community leaders. In terms of meeting regional, State, and national education needs, the planetarium presentations are directly tied to the space science component of elementary, middle, and high school curricula. By concentrating on the nature and intrinsic physics governing the galaxy, stars, and planets, we are able to introduce and reinforce to the Roadshow participants such concepts as mass, gravity, temperature, composition, and the nature of light. In many instances, we schedule school visits to coincide with a particular class or grade's coverage of space science during the school term. In this way, we can maximize our impact by using a practical reinforcement method for their book-learning and classroom activities. So far, the Roadshow has been an outstanding success! For instance, since its inception, the Fisk-Vanderbilt NASA Astronomy Roadshow has visited some 35 schools, community centers, and Vanderbilt's Dyer Observatory for a combined total of 350 planetarium shows, comprising some 7, 650 participants (mostly K–12 students, but includes inservice training for some 80 elementary and middle school teachers). As such, we now have in place strong and ongoing links with several magnet schools in the Nashville metropolitan area, which we visit on a semester-by-semester basis, to be continued into the coming years. The Roadshow has also achieved an extremely broad and important impact by reaching traditionally poorly served sections of the community. Incredibly, over 39 percent (3, 000 people) of our Roadshow visitors during this timeframe have been from minority backgrounds.

Contact: Dr. David James, Vanderbilt University, Nashville, TN 37235. E-mail: djj@estrella.phy.vanderbilt.edu. Phone: 615-343-1812.

Primary URL: <http://www.physics.vanderbilt.edu/fasst/>

Secondary URL:

<http://www.physics.vanderbilt.edu/fasst/outreach.html>

ELEMENTARY AND SECONDARY EDUCATION

Educator Professional Development-Short Duration

A36. A Regional Center of Excellence in Astronomy Education

Theme(s): Planetary
 Msn/Prgm: SRT[B28]
 Description: We develop and conduct programming in astronomy education for students, teachers, and community members utilizing the Southern Cayuga Central Schools' (SCCS) existing 9-meter, 60-seat planetarium and two-pier observatory with CCD. This expands our reach to students and teachers of surrounding school districts and to the general public. Such facilities are rare in public schools. The district is in rural central New York State, 6 hours from New York City. This project allows students from the entire Finger Lakes region to experience the wonder of their universe firsthand, both through visits to the facilities and through classroom activities run by the teachers we train. It also provides a lecture program for our regular public presentations, with talks given by prominent space scientists from Cornell University and elsewhere.

Lead: Dr. Joseph Harrington, Cornell University, Ithaca, NY 14853. E-mail: jh@obleck.astro.cornell.edu. Phone: 607-254-8960.

Contact: Dr. Joseph Harrington, Cornell University, Ithaca, NY 14853. E-mail: jh@obleck.astro.cornell.edu. Phone: 607-254-8960.

Primary URL: <http://www.southern cayuga.org/Planetarium/Astronomyhome.htm>

Secondary URL: <http://obleck.astro.cornell.edu/>

Scientist(s): Dr. Joseph Harrington Cornell University Ithaca, NY
 Dr. Luke Keller Ithaca College Ithaca, NY
 Ms. Zoe Learner Cornell University Ithaca, NY
 Mr. Jagadheep Pandian Cornell University Ithaca, NY

Partner(s): Southern Cayuga Central Schools Aurora, NY

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Dec 04	30 Sep 05	Southern Cayuga Central Schools—Aurora, NY	0	175	0
14 Dec 04	30 Sep 05	Southern Cayuga Central Schools—Aurora, NY	0	200	0
14 Dec 04	30 Sep 05	Southern Cayuga Central Schools—Aurora, NY	990	0	0

A37. "A Teacher's Guide to the Universe": Wilkinson Microwave Anisotropy Probe (WMAP) Workshop

Theme(s): Astrophysics
 Msn/Prgm: WMAP[B58]
 Description: The objectives of this course were to introduce an audience of science teachers to the WMAP satellite and its mission and to share with them the results of the mission. This course was made available to participants in the National Science Teachers Association Convention. This workshop, which has been given at national and local conventions, introduces middle school, high school, and college teachers to cosmology and trains them in how to teach students about the origins and evolution of the universe in a hands-on way in their classrooms. This workshop directs them to resources found on the Internet, such as the "A Teacher's Guide to the Universe" Web site, the "Cosmic Journeys" Web site, and the Structure and Evolution of the Universe (SEU) Forum Web site. SEU Forum educator kits were distributed as a part of these workshops.

Contact: Ms. Lindsay Bartolone, Adler Planetarium and Astronomy Museum, Chicago, IL 60605.
 E-mail: clark@astro.princeton.edu. Phone: 312-322-0316.

Primary URL: <http://www.astro.princeton.edu/~clark/teachersguide.html>

Secondary URL: <http://map.gsfc.nasa.gov>

Scientist(s): Ms. Lindsay Bartolone Adler Planetarium and Astronomy Museum Chicago, IL

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	32	0

A38. Active Astronomy: Classroom Activities for Learning About Infrared Light

Theme(s): Astrophysics
 Msn/Prgm: SST[B52], SOFIA[B53]
 Description: Active Astronomy is a set of four classroom activities that allows students to explore invisible light. It was developed by the SOFIA E/PO program in collaboration with the physics department at Montana State University in Bozeman. The activities are designed to supplement classroom instruction on the electromagnetic spectrum, for which experiments ordinarily show only the behavior of visible light. All activities are standards-based (national science education standards). The activities were assessed by the Origins Forum evaluation team at the Space Telescope Science Institute and subsequently tested in more than 20 middle and high school classrooms in the United States. The SOFIA E/PO staff offers Active Astronomy short courses to teachers at national and regional science teacher conferences in collaboration with Spitzer Space Telescope E/PO personnel. Active Astronomy is also disseminated via the SOFIA Web site and the Space Sciences Educational Resources Directory.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Primary URL: http://sofia.arc.nasa.gov/Edu/materials/edu_materials.html

Scientist(s): Dr. Dana Backman NASA Ames Research Center Moffett Field, CA
 Dr. Matt Bobrowsky Space Telescope Science Institute Baltimore, MD
 Ms. Kimberly Ennico NASA Ames Research Center Moffett Field, CA
 Ms. Vivian Hoette Yerkes Observatory, University of Chicago Williams Bay, WI
 Ms. Darlene Mendoza Astronomical Society of the Pacific San Francisco, CA
 Dr. Catherine Pilachowski Indiana University, Bloomington Bloomington, IN
 Partner(s): Astronomical Society of the Pacific San Francisco, CA
 Search for Extraterrestrial Intelligence (SETI) Institute Mountain View, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	11 Oct 04	Yerkes Observatory, University of Chicago—Williams Bay, WI	11	0	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	9	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	55	0	0
28 Feb 05	28 Feb 05	Palo Alto Girl Scout House—Palo Alto, CA	40	0	0
30 Jun 05	30 Jun 05	NASA Ames Research Center—Moffett Field, CA	25	0	0
10 Aug 05	10 Aug 05	Indiana University, Bloomington—Bloomington, IN	30	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	10	0	0

A39. Americorp Training

Theme(s): Planetary

Msn/Prgm: GRACE[B4]

Description: GRACE master teachers and education staff trained the Americorp and 4-H CAPITAL staff who teach in over 100 after-school science programs. Attendees learned about gravity, the GRACE mission, and other NASA solar system programs.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu. Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu/spacevision>

Secondary URL:

<http://www.tsgc.utexas.edu>

Partner(s): Texas Cooperative Extension

College Station, TX

A40. Ancient Eyes Looked to the Skies: Archaeoastronomy in the Americas

Theme(s): Heliophysics

Msn/Prgm: Solar-B[B87]

Description: Teachers in grades 4–8 are invited to participate in an interdisciplinary workshop based on the science of archaeoastronomy: the study of the astronomical practices, observations, and techniques of ancient cultures. The subject enables a rich blending of astronomy, anthropology, archaeology, mathematics, and art. Teaching this subject with plenty of hands-on activities will allow participants to “walk in the footsteps of ancient astronomers” as they learn to carefully observe the sky and make inferences and draw conclusions from their observations and firsthand experiences.

Lead: Mr. Benjamin Burruss, Chabot Space and Science Center, Oakland, CA 94619.

E-mail: bburruss@chabotspace.org. Phone: 510-336-7308.

Primary URL: <http://www.chabotspace.org/vsc/solar/news/june2005archaeoastronomy.asp>

Scientist(s): Dr. Gibor Basri University of California, Berkeley Berkeley, CA
 Ms. Ruth Paglierani University of California, Berkeley Berkeley, CA
 Ms. Deborah Scherrer Stanford University Stanford, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
27 Jun 05	28 Jun 05	Chabot Space and Science Center—Oakland, CA	6	0	0

A41. Asteroids Arrive in the Classroom

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: Southwest Research Institute and the Little Thompson Observatory (LTO) provide teacher training workshops (each with a hands-on classroom project) that cover solar system information, where asteroids are found and what they are made of, how often they strike Earth and the Moon, and the real but very minimal potential for hazardous impacts on Earth. Workshops will meet specific State standards for grades 4–12 and be independently accredited and evaluated. This collaboration with scientists will build on the model of previous LTO workshops, which have received praise from teachers and the Thompson School District for direct impact on

classroom teaching. Bilingual materials in Spanish and English will be provided to support the large Hispanic population in this region.

Contact: Dr. Andrea Schweitzer, Little Thompson Observatory, Berthoud, CO 80513. E-mail: schweitz@frijol.com. Phone: 970-691-4747.

Primary URL: <http://www.boulder.swri.edu/>

Secondary URL: <http://www.starkids.org/>

Scientist(s):	Dr. William Bottke	Southwest Research Institute	Boulder, CO
	Dr. Cathy Olkin	Southwest Research Institute	Boulder, CO
	Dr. Andrea Schweitzer	Little Thompson Observatory	Berthoud, CO
	Dr. John Spencer	Southwest Research Institute	Boulder, CO
	Dr. Suzanne Traub-Metlay	Fiske Planetarium	Boulder, CO
Partner(s):	Denver Museum of Nature and Science		Denver, CO
	Discover Center Science Museum		Fort Collins, CO
	Fiske Planetarium		Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Jun 05	08 Jun 05	Little Thompson Observatory—Berthoud, CO	18	0	0
12 Aug 05	12 Aug 05	Fiske Planetarium—Boulder, CO	10	3	0

A42. AstroCappella: A Musical Exploration of the Universe

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: AstroCappella is a marriage of astronomy and music, developed by astronomers and educators and professionally recorded by the rocking a cappella group The Chromatics. A 70-minute workshop demonstrates the AstroCappella songs, Web site, activities, and CD-ROM materials.

Lead: Dr. Patricia Boyd, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: padi@milkyway.gsfc.nasa.gov. Phone: 301-286-2550.

Primary URL: <http://www.astrocappella.com>

Scientist(s):	Dr. Patricia Boyd	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Alan Smale	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Karen Smale	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	11 Oct 04	National Teacher Training Institute— Blue Ridge Community College— Weyers Cave, VA	15	0	0

A43. Astronomy Institute

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: LWS/PO[B90]

Description: At the Green Bank National Radio Astronomy Observatory (GBNRAO), scientists are collaborating with STP/LWS for the Annual Astronomy Institute Workshop. Three hours of graduate credit from the West Virginia University are included. Participants are exposed to cutting-edge Sun-Earth science and technology radio astronomy and a Radio Jove workshop designed to assist teachers, students, and scientists in the observation and analysis of natural radio transmissions from the Sun and Jupiter. Workshops about Telescopes in Education (TIE) are an opportunity for teachers to use a remotely controlled telescope and camera in a real-time, hands-on, interactive environment. Workshops also include the use of a 40-foot radio telescope for participants to work together on a project that extends their hands-on experiences a series of minicourses on astronomy, the Sun, and other stars; a background review of general science activities to raise students awareness of the Sun-Earth Connection, astronomy, radio astronomy, and the nature of science; and explanations of benchmarks and science standards.

Contact: Mr. Omar Eaton, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: oeaton@i-c-t.com. Phone: 301-982-1964.

Primary URL: <http://stargazers>

Secondary URL: <http://lws.gsfc.nasa.gov>

Scientist(s):	Mr. Omar Eaton	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Evelina Felicite-Maurice	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Sue Heatherley	Green Bank National Radio Astronomy Observatory	Green Bank, WV
Partner(s):	Green Bank National Radio Astronomy Observatory		Green Bank, WV

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Jul 05	22 Jul 05	Green Bank National Radio Astronomy Observatory—Green Bank, WV	31	0	0

A44. Beyond Einstein: From the Big Bang to Black Holes

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: This educator workshop provides an introduction to the Beyond Einstein program of missions and related science topics. Participants learn background on Einstein's discoveries and questions that scientists wish to answer, as well as the past, present, and future missions that will help answer those questions.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://universe.nasa.gov>

Scientist(s):	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Barbara Mattson	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Mar 05	08 Mar 05	Pennsylvania State University— University Park, PA	7	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	40	0	0

A45. "Black Holes in a Different Light": Educator Workshop

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: This educator workshop introduces participants to black holes and illustrates how we see them in different parts of the electromagnetic spectrum. The workshop includes a PowerPoint presentation and several demonstrations and activities about black holes. These workshops were conducted by E/PO professionals and the High Energy Astrophysics Science Archive Research Center (HEASARC) Educator Ambassador.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://heasarc.gsfc.nasa.gov>

Secondary URL: <http://imagine.gsfc.nasa.gov>

Scientist(s):	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Cheryl Niemela	Rogers High School	Puyallup, WA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	30	0	0
18 Jul 05	18 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD—	13	0	0
27 Jul 05	27 Jul 05	Civil Air Patrol—Puyallup, WA	9	0	0

A46. Chandra E/PO Grant: 10 Years of the Penn State Inservice Workshops in Astronomy

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: Under a Chandra E/PO grant, 24 teachers attended one of two 5-day inservice workshops offered for 2 hours of graduate credit at Pennsylvania State University. The educators included participants from rural, suburban, and urban school districts throughout Pennsylvania, and we also had a teacher from Arizona attend. Again this year, an educator from a Department of Defense school for military dependents attended. The two workshops offered were called "From the Solar System to the Stars: An Inquiry-Based Tour of the Local Universe" and "From the Milky Way Galaxy to the Edge of the Universe: A Content-Rich Tour of the Universe." Sessions included content lectures, inquiry-based demonstrations and activities, research talks, roundtable discussions, and nighttime telescope observation.

Contact: Dr. Christopher Palma, Pennsylvania State University, University Park, PA 16802.
E-mail: cpalma@astro.psu.edu. Phone: 814-865-6236.

Primary URL: <http://www.astro.psu.edu/psiwa/>

Secondary URL: <http://app.outreach.psu.edu/Science4Educators/>

Scientist(s):	Dr. Neil Brandt	Pennsylvania State University	University Park, PA
	Dr. Jane Charlton	Pennsylvania State University	University Park, PA
	Dr. Dirk Grupe	Pennsylvania State University	University Park, PA
	Ms. Kim Herrmann	Pennsylvania State University	University Park, PA
	Dr. Michelle Larson	Pennsylvania State University	University Park, PA
	Dr. Kevin Luhman	Pennsylvania State University	University Park, PA
	Dr. Connor Nixon	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. John Nousek	Pennsylvania State University	University Park, PA
	Dr. Christopher Palma	Pennsylvania State University	University Park, PA
	Dr. Mercedes Richards	Pennsylvania State University	University Park, PA
	Dr. Donald Schneider	Pennsylvania State University	University Park, PA
	Dr. Ohad Shemmer	Pennsylvania State University	University Park, PA

Partner(s):	Pennsylvania Space Grant Consortium	University Park, PA
	Whitaker Center for Science and the Arts	Harrisburg, PA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Jul 05	22 Jul 05	Pennsylvania State University— University Park, PA	12	0	0
24 Jul 05	29 Jul 05	Pennsylvania State University— University Park—PA	24	0	0

A47. Chandra X-ray Center: Teacher Workshops and Presentations

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: The Chandra X-ray Center holds professional development and inservice workshops for teachers on space science topics in collaboration with the Wright Center for Science Education at Tufts University (Medford, MA), provides scientist and educator presenters for education workshops and conferences sponsored by other organizations, cosponsors the Rutgers Astrophysics Summer Institute for high school students and teachers, and carries out a program to prepare Chandra Resource Agents through workshops and the Wright Center's Teacher-Scholar Program. This year, one workshop was held at MacDonald Observatory in collaboration with the Wright Center. Nineteen educators, selected from a nationwide application pool, participated. Twenty-five students, six teachers, and six students from the Rutgers Graduate School of Education participated in the Rutgers Summer Institute. In addition, the Chandra Education Specialist, Ms. Donna Young, and the Chandra Resource Agents presented talks and workshops at 38 national and State education conferences, as well as other national education events such as Science Olympiad Coaches Clinics.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.Primary URL: <http://chandra.harvard.edu>

Secondary

URL: http://www.tufts.edu/as/wright_center

Scientist(s):	Mr. David Beier	Hawthorn Hill Elementary School	Lee's Summit, MO
	Dr. Lydia Dambekalns	University of Wyoming	Laramie, WY
	Ms. Christine Fellows	Chandra X-ray Center	Cambridge, MA
	Mr. Gary Glick	Tufts University	Medford, MA
	Mr. Anthony Heinzman	Apple Valley Middle School	Apple Valley, CA
	Ms. Margaret Holzer	Chandra X-ray Center	Cambridge, MA
	Dr. John Kolena	North Carolina School of Science and Mathematics	Durham, NC
	Ms. Rita Kujawa	Wingate Elementary School	Fort Wingate, NM
	Ms. Karen Lancour	Tufts University	Medford, MA
	Ms. Jan Malle	Point Park College	Pittsburgh, PA
	Dr. Terry Matilsky	Rutgers University	Piscataway, NJ
	Ms. Nathalie Miebach	Chandra X-ray Center	Cambridge, MA
	Ms. Pam Perry	Tufts University	Medford, MA
	Dr. Christine Anne Royce	Shippensburg University	Shippensburg, PA
	Mr. Robert Sparks	Prairie School	The Racine, WI
	Mr. Paul Stengel	Chandra X-ray Center	Cambridge, MA
	Ms. Holly Tollefson	Chandra X-ray Center	Cambridge, MA
	Mr. Mark Van Hecke	Science Olympiad	Rochester Hills, MI
	Mr. Linder Winter	Tufts University	Medford, MA
	Ms. Donna Young	Tufts University	Medford, MA
Partner(s):	Tufts University		Medford, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	03 Oct 04	12th Annual Science Olympiad Coaches Clinic— Hammond, IN	179	0	0
01 Oct 04	03 Oct 04	12th Annual Science Olympiad Coaches Clinic— Hammond, IN	350	0	0
08 Oct 04	08 Oct 04	Maine Science Teachers Association Fall Conference 2004—Gardener, ME	50	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	16	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	20	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	62	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	65	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	76	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	58	0	0

18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	65	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	76	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	15	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	20	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	25	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	30	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	35	0	0
11 Dec 04	11 Dec 04	Alpena Community College—Alpena, MI	12	0	0
07 Jan 05	08 Jan 05	Wyoming Math and Science Teachers Conference—Casper, WY	40	0	0
07 Jan 05	08 Jan 05	Wyoming Math and Science Teachers Conference—Casper, WY	84	0	0
08 Jan 05	12 Jan 05	American Association of Physics Teachers—Albuquerque, NM	10	0	0
10 Mar 05	10 Mar 05	Grand Valley State University—Allendale, MI	34	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	15	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	21	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	26	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	35	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	38	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	47	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	72	0	0
16 Apr 05	16 Apr 05	La Crosse Center—La Crosse, WI	22	0	0
10 May 05	10 May 05	New Berlin High School—New Berlin, WI	31	0	0
22 May 05	22 May 05	Rutgers University—Piscataway, NJ	5	0	0
12 Jun 05	12 Jun 05	Tufts University—Medford, MA	6	0	0
27 Jun 05	17 Jul 05	Rutgers University—Piscataway, NJ	39	0	0
21 Jul 05	27 Jul 05	McDonald Observatory—Fort Davis, TX	29	0	0

A48. Conference Presentations of Einstein's Curved Space-Time and Gravity Probe B

Theme(s): Astrophysics

Msn/Prgm: GP-B[B48]

Description: The GP-B science and technology story is presented to teachers at national and regional conferences around the country in such a way as to prepare the teachers to take the story and ideas back to their own classrooms. All teachers receive several educational products, including guides, posters, and a DVD.

Lead: Ms. Shannon Range, Stanford University, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.

Primary URL: <http://einstein.stanford.edu>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	105	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	0	105	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	0	105	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	0	105	0
08 Jan 05	12 Jan 05	American Association of Physics Teachers—Albuquerque, NM	0	70	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	110	0

A49. Cosmic Hot Interstellar Plasma Spectrometer (CHIPS): Teacher Professional Development

Theme(s): Astrophysics

Msn/Prgm: CHIPS[B54]
 Description: The CHIPS E/PO program provides professional development opportunities for science teachers. These opportunities range from workshops at teacher conferences to activities and tours of the Space Sciences Laboratory at the University of California, Berkeley. In these programs, we disseminate curriculum materials developed for CHIPS, as well as other space science curriculum materials.
 Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.
 Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu. Phone: 510-643-2178.
 Primary URL: http://cse.ssl.berkeley.edu/chips_epo/science.html
 Scientist(s): Dr. Bryan Mendez University of California, Berkeley Berkeley, CA
 Dr. Laura Peticolas University of California, Berkeley Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	17	0	0
20 Oct 04	24 Oct 04	Society for the Advancement of Chicanos and Native Americans in Science National Conference 2004—Austin, TX	14	0	0

A50. "Cosmic Questions" Professional Development

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SEU[B35]
 Description: In conjunction with its "Cosmic Questions" traveling exhibition, the SEU Forum has partnered with the Museum of Science, Boston, to create materials and programs that help teachers of grades 7-12 (and museum docents) to enhance their own content knowledge and prepare them to effectively use the exhibition to meet science and mathematics education standards. All museums or science centers that host the exhibition will receive a supply of "Cosmic Questions" educator guides for teachers, a train-the-trainers session for professional development providers, and a set of workshop templates that outlines an adaptable professional development syllabus.
 Lead: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138. E-mail: mdussault@cfa.harvard.edu. Phone: 617-496-7962.
 Primary URL: <http://cfa-www.harvard.edu/seuforum/exhibit/>
 Scientist(s): Ms. Mary Dussault Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Partner(s): Museum of Science Boston, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
04 Oct 04	04 Oct 04	Flandrau Science Center—Tucson, AZ	12	0	0
05 Oct 04	05 Oct 04	Flandrau Science Center—Tucson, AZ	10	0	0
24 Feb 05	24 Feb 05	Museum of the Rockies—Bozeman, MT	8	0	0
25 Feb 05	25 Feb 05	Museum of the Rockies—Bozeman, MT	30	0	0
26 Feb 05	26 Feb 05	Museum of the Rockies—Bozeman, MT	33	0	0

A51. Deep Impact: Educator Training

Theme(s): Planetary
 Msn/Prgm: Deep Impact[B108]
 Description: The Deep Impact mission gave two educator workshops centered on the Deep Impact mission and participated in many others to prepare teachers and their classrooms to better understand the encounter with Tempel 1 and the science applicable to comets, observation, and teamwork. Deep Impact lessons were given, teaching science with story and song and preparing teachers to educate their students in methods of science inquiry, comet modeling, and comparing cultures that used the skies for observation with NASA methods of observation. The Solar System Educators Program has separate reports for Deep Impact entered in the Solar System Ambassador Program format.
 Contact: Ms. Maura Rountree-Brown, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Maura.Rountree-Brown@jpl.nasa.gov. Phone: 818-393-4897.
 Primary URL: <http://deepimpact.astro.umd.edu/educ>
 Secondary URL: <http://deepimpact.jpl.nasa.gov/educ>
 Scientist(s): Ms. Jacinta Behne Mid-continent Research for Education and Learning Aurora, CO
 Dr. Paul Doherty Exploratorium San Francisco, CA
 Mr. Garrison Hall Pauline Glenn Springs Elementary School Pauline, SC
 Dr. Lucy McFadden University of Maryland College Park, MD
 Dr. Karen Meech University of Hawaii at Manoa Honolulu, HI
 Dr. Jay Melosh University of Arizona Tucson, AZ
 Mr. John Ristvey Mid-continent Research for Education and Learning Aurora, CO
 Ms. Maura Rountree-Brown NASA Jet Propulsion Laboratory Pasadena, CA
 Dr. Peter Schultz Brown University Providence, RI
 Ms. Elizabeth Warner University of Maryland College Park, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 Nov 04	09 Nov 04	Palm Crest Elementary School—La Ca-ada, CA	43	0	0
16 Nov 04	16 Nov 04	University System of Maryland, Shady Grove—Rockville, MD	100	0	0
27 Nov 04	27 Nov 04	Institute for Astronomy—Honolulu, HI	14	0	0
09 Dec 04	09 Dec 04	Palm Crest Elementary School—La Ca-ada, CA	21	0	0
11 Jan 05	11 Jan 05	NASA Kennedy Space Center Visitor Center—Kennedy Space Center, FL	31	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	22	420	0
01 Jun 05	30 Jun 05	U.S. Space and Rocket Center—Huntsville, AL	655	0	0
16 Jun 05	16 Jun 05	Denver Museum of Nature and Science—Denver, CO	35	0	0
16 Jun 05	16 Jun 05	South Carolina Department of Education—Columbia, SC	17	0	0
20 Jun 05	24 Jun 05	Andover High School—Andover, MN	75	0	0
23 Jun 05	23 Jun 05	South Carolina Department of Education—Columbia, SC	17	0	0
24 Jun 05	24 Jun 05	Los Angeles County Office of Education—Downey, CA	80	0	0
24 Jun 05	30 Jun 05	Mauna Kea Astronomy Education Center—Hilo, HI	38	0	0
30 Jun 05	30 Jun 05	South Carolina Department of Education—Columbia, SC	17	0	0
01 Jul 05	31 Jul 05	Onizuka Space Center—Kailua-Kona, HI	75	0	0
01 Jul 05	31 Jul 05	Wheeling Jesuit University—Wheeling, WV	99	0	0
02 Jul 05	02 Jul 05	Fernbank Science Center—Atlanta, GA	108	200	0
03 Jul 05	10 Jul 05	Virginia Living Museum—Newport News, VA	300	0	0
08 Jul 05	08 Jul 05	Exploratorium—San Francisco, CA	90	12	250
09 Jul 05	09 Jul 05	University of Arizona—Tucson, AZ	320	0	0
11 Jul 05	15 Jul 05	NASA Johnson Space Center—Houston, TX	35	0	0
28 Jul 05	28 Jul 05	NASA Kennedy Space Center—Kennedy Space Center, FL	160	0	0

A52. Deep Space Network (DSN): Educational Activities

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: DSN Educational Activities cover classroom presentations, teacher workshops, and other events where the role of the Deep Space Network in space communications is described by presentation or demonstrated through hands-on activities. In many cases, this instruction involves a demonstration of the math-related activity on the back of the DSN wallsheet.

Lead: Ms. Shirley Wolff, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shirley.e.wolff@jpl.nasa.gov. Phone: 818-354-4069.

Primary URL: <http://deepspace.jpl.nasa.gov/dsn>

Scientist(s):	Mr. Art Hammon	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Steven Levin	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Harold Minuskin	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jim Shell	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Russell Woodall	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Oct 04	18 Oct 04	Christian Academy of Prescott—Prescott, AZ	15	0	0
24 Feb 05	26 Feb 05	National Afterschool Association—San Antonio, TX	0	1000	0
10 Mar 05	10 Mar 05	Farragut Elementary School—Culver City, CA	115	0	0
01 Apr 05	01 Apr 05	University of Missouri-Kansas City—Kansas City, MO	26	0	0
20 Apr 05	20 Apr 05	Mesa Union Elementary School—Somis, CA	175	0	0
02 May 05	02 May 05	Wiley Canyon Elementary School—Newhall, CA	31	0	0

A53. Discovery Program: Conferences

Theme(s): Planetary

Msn/Prgm: DPSO[B106]

Description: The goal of participation in conferences is to reach formal and informal educators, to make our products and activities known to them, and to train them in using those products and activities with their students.

Lead: Ms. Shari Asplund, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shari.e.asplund@jpl.nasa.gov. Phone: 818-354-7280.

Scientist(s):	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX		
	Ms. Shari Asplund	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Ms. Jacinta Behne	Mid-continent Research for Education and Learning	Aurora, CO		
	Ms. Kathryn Guimond	College of Charleston	Charleston, SC		
	Ms. Stephenie Lievense	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Mr. Louis Mayo	NASA Goddard Space Flight Center	Greenbelt, MD		
	Ms. Becky Nelson	Lunar and Planetary Institute	Houston, TX		
	Ms. Maura Rountree-Brown	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV		
	Dr. Stephanie Shipp	Rice University	Houston, TX		
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	45	0	0
24 Feb 05	26 Feb 05	National Afterschool Association—San Antonio, TX	310	2000	0

A54. Earth and Space Science Education Product Workshop

Theme(s):	Earth Science, Heliophysics, Astrophysics, Planetary		
Msn/Prgm:	QuikSCAT[B7], TOMS/EP[B9], TRMM[B10], HST[B49], ACE[B73], Fast Auroral SnapshoT (FAST) Explorer[B74], IMAGE[B75], RHESSI[B76], THEMIS[B79], TRACE[B80], Polar[B82], Wind[B83], SOHO[B84], STEREO[B88]		
Description:	The Institute for Global Environmental Strategies (IGES) conducts professional development workshops for NASA educators, including aerospace education specialists (AESPs), NASA Educator Resource Center (ERC) representatives, and space science brokers/facilitators. The purpose of the workshop is to (a) train NASA educators on how to use education materials that passed Earth/space science education product reviews and were recommended for distribution through workshops, (b) introduce NASA educators to new science research/content related to the education materials presented, and (c) bring together NASA educators to encourage collaboration.		
Lead:	Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209. E-mail: theresa_schwerin@strategies.org . Phone: 703-312-0825.		
Scientist(s):	Mr. Brion Au Dr. Dana Backman Ms. Alicia Baturoni Ms. Sharon Bowers Dr. Diane Clayton Mr. John Ensworth Dr. James Green Dr. Nick Haddad Ms. Pamela Harman Ms. Elaine Lewis Dr. Bryan Mendez Dr. Laura Peticolas Ms. Shannon Range Dr. Patricia Reiff Mr. Robert Sepulveda Dr. Simon Steel Ms. Kay Tobola Dr. Harri Vanhala Dr. Lee Vierling Mr. Keith Watt Dr. Ming-Ying Wei	NASA Johnson Space Center NASA Ames Research Center Space Education Initiatives NASA Langley Research Center NASA Headquarters Office of Education Institute for Global Environmental Strategies NASA Goddard Space Flight Center TERC Search for Extraterrestrial Intelligence (SETI) Institute NASA Goddard Space Flight Center University of California, Berkeley University of California, Berkeley Stanford University Rice University Science Applications International Corporation (SAIC) Harvard-Smithsonian Center for Astrophysics Lockheed Martin Corporation Challenger Center for Space Science Education University of Idaho Arizona State University NASA Headquarters Science Mission Directorate	Houston, TX Moffett Field, CA Green Bay, WI Hampton, VA Washington, DC Arlington, VA Greenbelt, MD Cambridge, MA Mountain View, CA Greenbelt, MD Berkeley, CA Berkeley, CA Stanford, CA Houston, TX Hampton, VA Cambridge, MA Houston, TX Alexandria, VA Moscow, ID Tempe, AZ Washington, DC

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Nov 04	20 Nov 04	NASA Johnson Space Center—Houston, TX	32	0	0

A55. Expanding the Universe in the Classroom: Professional Development DVD

Theme(s):	Astrophysics				
Msn/Prgm:	SEU[B35], DePaul B/F[B37], WMAP[B58]				
Description:	A team of scientists and educators at the Harvard-Smithsonian Center for Astrophysics (CfA), through our NASA-funded Universe Education Forum, collaborated to develop a DVD-based teaching and learning tool for Earth science, physical science, physics, and chemistry teachers of grades 8–12. The DVD, released in November 2005, contains resources for teaching about the structure and evolution of the universe (SEU), including the evidence and explanations for the Big Bang model for the early universe, and the expansion of the universe—key understandings in the National Science Education Standards. Materials on the DVD comprise inquiry-based classroom materials and assessments, including some developed by SEU missions; classroom scenes of students and teachers using these materials; interviews with students regarding their ideas about the structure and evolution of the universe; explanations of the science of Big Bang cosmology, including visualizations, ani-				

mations, and demonstrations; and interviews with scientists conducting current research on these topics. Work on this project in 2005 has included classroom pilot-testing and filming, workshops, and collaborative review meetings with educators who are acting as development partners.

Lead: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: mdussault@cfa.harvard.edu. Phone: 617-496-7962.

Contact: Ms. Erika Reinfeld, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: ereinfeld@cfa.harvard.edu. Phone: 617-495-5433.

Primary URL: <http://www.cfa.harvard.edu/seuforum/btss/>

Scientist(s):	Dr. David Charbonneau	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Marcelo Gleiser	Dartmouth College	Hanover, NH
	Dr. Roy Gould	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Robert Kirshner	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Kim McLeod	Wellesley College	Wellesley, MA
	Dr. Hiranya Peiris	University of Chicago	Chicago, IL
	Ms. Erika Reinfeld	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Simon Steel	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Partner(s):	Adler Planetarium and Astronomy Museum		Chicago, IL

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
30 Oct 04	30 Oct 04	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	5	0	0
08 Nov 04	08 Nov 04	Milton Academy—Milton, MA	16	0	0
12 Nov 04	12 Nov 04	Lawrence High School—Lawrence, MA	31	0	0
18 Nov 04	18 Nov 04	Weymouth High School—Weymouth, MA	61	0	0
19 Nov 04	19 Nov 04	Lincoln-Sudbury Regional High School—Sudbury, MA	26	0	0
22 Nov 04	22 Nov 04	Lincoln-Sudbury Regional High School—Sudbury, MA	26	0	0
04 Dec 04	04 Dec 04	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	5	0	0
14 Dec 04	14 Dec 04	Milton Academy—Milton, MA	16	0	0
15 Dec 04	15 Dec 04	Lawrence High School—Lawrence, MA	31	0	0
29 Jan 05	29 Jan 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	5	0	0
03 Feb 05	03 Feb 05	Weymouth High School—Weymouth, MA	5	0	0
04 Mar 05	04 Mar 05	Hubbard High School—Chicago, IL	4	0	0
05 Mar 05	05 Mar 05	DePaul University—Chicago, IL	12	0	0
07 Mar 05	07 Mar 05	Adler Planetarium and Astronomy Museum—Chicago, IL	8	0	0
08 Mar 05	08 Mar 05	Hubbard High School—Chicago, IL	61	0	0
09 Apr 05	09 Apr 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	5	0	0

A56. Exploring Icy Worlds

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: Exploring Icy Worlds undertakes a focused program linked to the primary science objectives of the parent proposals (Comets, Neptune). Comets have triggered the human imagination throughout history, and recent events such as the Shoemaker-Levy 9 comet impact have had an enormous effect on public interest. Neptune and Comets share the cold and volatile region of the outer solar system, where Kuiper Belt comets formed, which are distinct from Oort Cloud comets that formed closer to the Sun. The scientific team will exploit these inherently fascinating themes to implement an E/PO program in collaboration with its formal educator partners, the Madison Metropolitan School District and the Science Museum of Minnesota for Teacher Training, and an informal education effort in the form of a Visiting Scientist Program.

Lead: Ms. Rosalyn Pertzborn, University of Wisconsin-Madison, Madison, WI 53706. E-mail: rosep@ssec.wisc.edu. Phone: 608-265-4160.

Contact: Ms. Rosalyn Pertzborn, University of Wisconsin-Madison, Madison, WI 53706. E-mail: rosep@ssec.wisc.edu. Phone: 608-265-4160.

Primary URL: <http://htellus.ssec.wisc.edu/outreach>

Scientist(s):	Dr. Walt Harris	University of Wisconsin-Madison	Madison, WI
	Dr. Sanjay Limaye	University of Wisconsin-Madison	Madison, WI
	Ms. Rosalyn Pertzborn	University of Wisconsin-Madison	Madison, WI
	Dr. Lawrence Sromovsky	University of Wisconsin-Madison	Madison, WI

Partner(s): Madison Metropolitan School District

Madison, WI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 May 05	10 May 05	University of Wisconsin-Madison—Madison, WI	0	120	0
15 Jul 05	24 Aug 05	Discovery Center—Rockford, IL	0	17200	0
28 Aug 05	30 Sep 05	University of Wisconsin-Madison—Madison, WI	0	1510	0

A57. Exploring Our Solar Neighborhood

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: IDEAS[B26]

Description: The primary purpose of the program Exploring Our Solar Neighborhood was to connect teachers and students to explorers and their exploration activities in astronomy and Earth and space science. The central goal was to provide Tennessee secondary school teachers with the content and skills to incorporate more astronomy and Earth and space science into their science courses. Teachers and students were able to interact with astronomers and space scientists from Vanderbilt and Tennessee State University in the unique environment of the Vanderbilt Dyer Observatory. This successful program has utilized workshops for middle school teachers and for teachers and their students visiting the Dyer. Visits to the schools and virtual interactive linkages have followed the workshops. The Corps of Explorers activity was also initiated, which has brought particularly motivated and talented students of science to the observatory for extracurricular activities. The program team has been able to accomplish the major program objectives of introducing new materials on astronomy and space science to teachers in a professional development environment and to students in a hands-on learning experience in a special place of science.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: hbradbur@stsci.edu. Phone: 410-338-4968.

Scientist(s): Ms. Judy Butler Tennessee State University Nashville, TN
Dr. Charles Chappell Vanderbilt University Nashville, TN

Partner(s): Tennessee State University Nashville, TN
Vanderbilt University Nashville, TN

A58. "Exploring the Hot Universe with the Coolest Satellite" Educator Workshop

Theme(s): Astrophysics

Msn/Prgm: Suzaku[B68]

Description: This educator workshop introduces teachers to the Suzaku (formerly known as Astro-E2) satellite, the science and technology behind the mission, and a range of educational products and programs related to the mission. Using video clips from the mission's education video, the workshop engages participants in discussions and activities regarding x-ray spectroscopy, x-ray optics, international collaborations, and the use of video in the classroom. Workshops are presented by E/PO professionals and the Astro-E2 Educator Ambassador.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://astroe2lc.gsfc.nasa.gov>

Secondary

URL: <http://epo.sonoma.edu/ambassadors>

Scientist(s): Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD
Ms. Sara Mitchell NASA Goddard Space Flight Center Greenbelt, MD
Ms. Marie Pool Clinton Public Schools Clinton, OK

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Oct 04	16 Oct 04	Oklahoma Math and Science Rural Partnership—Weatherford, OK	30	0	0
21 Oct 04	21 Oct 04	Oklahoma Science Teachers Association Conference—Tulsa, OK	23	0	0
09 Nov 04	09 Nov 04	Oklahoma State Department of Education Superintendent's Math and Science Conference—Oklahoma City, OK	71	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	14	0	0
10 Mar 05	10 Mar 05	National Teacher Training Institute—Harrisonburg, VA	4	0	0
23 Mar 05	23 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	12	0
21 Jul 05	21 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	11	0	0
17 Sep 05	17 Sep 05	Southwestern Oklahoma State University—Weatherford, OK	35	0	0

A59. "Exploring the Solar System": Teacher Workshops

Theme(s): Astrophysics, Planetary

Msn/Prgm: Astromaterials Program[B112]

Description: "Exploring the Solar System" teacher workshops are collaborations between the scientist-educator team at NASA Johnson Space Center and other solar system education groups that train teachers to use solar system examples while teaching Earth science. The focus is on comparative planetology and the processes that operate on multiple planets. The workshops use a variety of NASA space science curriculum materials. The presentations take an interdisciplinary approach and include background information as well as hands-on and inquiry-based activities.

Lead: Dr. Marilyn Lindstrom, NASA Johnson Space Center, Houston, TX 77058.
E-mail: marilyn.lindstrom-1@nasa.gov. Phone: 281-483-5135.

Primary URL: <http://ares.jsc.nasa.gov/education>

Scientist(s):	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Ms. Shari Asplund	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kathryn Guimond	College of Charleston	Charleston, SC
	Mr. Michael Henry	Lockheed Martin Corporation	Houston, TX
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Ms. Lorena Loftin	Lockheed Martin Corporation	Houston, TX
	Ms. Leslie Lowes	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Cassandra Runyon	College of Charleston	Charleston, SC
	Dr. Stephanie Shipp	Rice University	Houston, TX
	Dr. Eileen Stansbery	NASA Johnson Space Center	Houston, TX
	Ms. Karen Stocco	Pasadena Independent School District	Pasadena, TX
	Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	75	0	0
13 Dec 04	17 Dec 04	American Geophysical Union Annual Fall Meeting—San Francisco, CA	57	0	0
24 Feb 05	26 Feb 05	National Afterschool Association—San Antonio, TX	50	0	0

A60. Future Astronomy: The Infrared Universe

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: In July of 2005, 15 secondary-school science teachers from Texas, California, and West Virginia participated in a 4-day, 3-night professional development workshop at McDonald Observatory. The workshop focused on the importance of the infrared portion of the electromagnetic spectrum. The participants interacted with astronomers to learn how this wavelength region opens up new windows for the study of our universe and how SAFIR (the Single Aperture Far Infrared Observatory) is being planned. They performed activities, toured research facilities, and made nighttime observations on several telescopes. Several new classroom activities were written especially for this workshop. Overall, the combination of formative and summative evaluations shows positive and long-lasting impact on the teachers. The most enduring impact came from teachers' interactions with astronomers and their own observing experiences with the 0.9-meter and smaller telescopes. Some teachers incorporated the SOFIA Active Astronomy materials into their science instruction following the workshop, most likely because they practiced using these same materials and activities during their workshop at McDonald Observatory.

Lead: Dr. Dan Lester, University of Texas at Austin, Austin, TX 78712. E-mail: dlf@astro.as.utexas.edu.
Phone: 512-471-3442.

Contact: Dr. Mary Hemenway, University of Texas at Austin, Austin, TX 78712. E-mail: marykay@astro.as.utexas.edu.
Phone: 512-471-1309.

Scientist(s):	Dr. Mary Kay Hemenway	University of Texas at Austin	Austin, TX
	Dr. Dan Lester	University of Texas at Austin	Austin, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
06 Jul 05	09 Jul 05	McDonald Observatory—Fort Davis, TX	15	0	1

A61. GALEX: Universe Teacher Workshops

Theme(s): Astrophysics

Msn/Prgm: GALEX[B55]

Description: Galaxy Evolution Explorer (GALEX) Educator Ambassadors are part of the SEU Educator Ambassador program, coordinated by the E/PO group at Sonoma State University (SSU). The Educator Ambassadors are trained biyearly at SSU to help develop, test, disseminate, and conduct workshops for teachers using materials from all SEU missions.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
Phone: 707-664-2655.

Primary URL: http://www.galex.caltech.edu/EDUCATION/GALEX_EPO.html

Secondary URL: <http://spaceplace.nasa.gov/en/kids/>

Scientist(s):	Ms. Janet Moore	Challenger Learning Center at Prairie Aviation Museum	Bloomington, IL		
	Ms. Linda Smith	Paulsboro Public Schools	Pittsgrove, NJ		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	14 Oct 04	New Jersey Science Teachers Association Conference—Somerset, NJ	34	0	0
03 Nov 04	03 Nov 04	New Jersey Council of Elementary Science 16th Annual Conference—Glassboro, NJ	101	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	35	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	53	0	0
15 Apr 05	15 Apr 05	Challenger Learning Center at Prairie Aviation Museum—Bloomington, IL	49	0	0
05 Aug 05	05 Aug 05	Challenger Learning Center at Prairie Aviation Museum—Bloomington, IL	25	0	0
15 Sep 05	16 Sep 05	Challenger Learning Center at Prairie Aviation Museum—Bloomington, IL	24	0	0

A62. GAVRT: Educational Conferences and Outreach Activities

Theme(s): Planetary
Msn/Prgm: DSMS[B114]
Description: Representatives from the Goldstone Apple Valley Radio Telescope (GAVRT) project use educational conferences and similar venues to make presentations with a view to recruiting teachers to participate in GAVRT. At some conferences, exhibit booths are staffed and displays and materials are available for discussion with teachers and other visitors. Usually, workshops are given during the conference to further demonstrate how teachers can benefit their students through the project. Additionally, GAVRT is sometimes presented in poster form by JPL scientists at science conferences. When JPL scientists or GAVRT personnel attend a conference in a city where there is a GAVRT participating school, every effort is made for that individual to visit the school and talk directly to the students.

Lead: Mr. David MacLaren, Lewis Center for Educational Research, Apple Valley, CA 92307.

E-mail: dmacclaren@lcer.org. Phone: 760-946-5414.

Primary URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Secondary

URL: <http://www.lcer.org/gavrt>

Scientist(s):	Dr. Scott Bolton	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kim Bunnell	Lewis Center for Educational Research	Apple Valley, CA
	Dr. Mark Hofstadter	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David MacLaren	Lewis Center for Educational Research	Apple Valley, CA
	Ms. Pat Reeder	Lewis Center for Educational Research	Apple Valley, CA
	Ms. Deborah Williams	Ballard Junior High School	Huxley, IA
	Ms. Shirley Wolff	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	7	300	0
08 Nov 04	12 Nov 04	American Astronomical Society/Division of Planetary Sciences—Louisville, KY	0	420	0
09 Nov 04	09 Nov 04	Fort Knox High School—Fort Knox, KY	72	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	1	200	0
24 Jan 05	25 Jan 05	California Charter Schools Conference 2005—Pasadena, CA	0	260	0
18 Apr 05	18 Apr 05	Watts Learning Center—Los Angeles, CA	8	0	0
29 Aug 05	01 Sep 05	American Institute for Aeronautics and Astronautics Space 2005—Long Beach, CA	0	1100	0
08 Sep 05	08 Sep 05	Lakenheath Middle School—Lakenheath, United Kingdom	199	0	0

A63. GAVRT: Teacher Training

Theme(s): Planetary
Msn/Prgm: DSMS[B114]
Description: In order to bring the Goldstone Apple Valley Radio Telescope (GAVRT) to their classrooms, teachers require specialized training. Four-day workshops introduce educators to the 34-meter radio telescope, which they learn to control and calibrate, and to radio astronomy. Guidance is offered in implementing the GAVRT curriculum, and a JPL scientist attends for at least 1 day to introduce the concept of students producing research-quality results from their observations. Training is given primarily at the Lewis Center for Educational Research facility

in Apple Valley, CA, but one session each year is held at Auburn University in Alabama. With the introduction of Department of Defense Education Activity (DoDEA) American schools overseas into the GAVRT project, training also takes place in Europe, Japan, and other locations set up by DoDEA.

Contact: Ms. Kim Bunnell, Lewis Center for Educational Research, Apple Valley, CA 92307. E-mail: kim@lcer.org.
Phone: 760-946-5414.

Primary URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Secondary

URL: <http://www.gavrt.org/>

Scientist(s):	Mr. Robert Arie	Lewis Center for Educational Research	Apple Valley, CA
	Dr. Mark Hofstadter	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Michael Klein	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David MacLaren	Lewis Center for Educational Research	Apple Valley, CA
	Ms. Pat Reeder	Lewis Center for Educational Research	Apple Valley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Oct 04	08 Oct 04	Department of Defense Education Activity (DoDEA), Unit 29623—Wiesbaden, Germany	16	0	0
12 Oct 04	15 Oct 04	Department of Defense Education Activity (DoDEA), Unit 29623—Wiesbaden, Germany	13	0	0
15 Nov 04	18 Nov 04	Lewis Center for Educational Research—Apple Valley, CA	11	0	0
25 Apr 05	29 Apr 05	Domestic Dependents Elementary and Secondary Schools (DDESS)—Apra Heights, Guam	20	0	0
09 May 05	12 May 05	Lewis Center for Educational Research—Apple Valley, CA	12	0	0
20 Jun 05	23 Jun 05	Auburn University—Auburn, AL	3	0	0
25 Jul 05	28 Jul 05	Lewis Center for Educational Research—Apple Valley, CA	4	0	0

A64. GLAST: The High-Energy Classroom Teacher Workshops

Theme(s): Astrophysics

Msn/Prgm: GLAST[B47]

Description: GLAST Educator Ambassadors and E/PO professionals use materials developed by the GLAST project to conduct teacher workshops at national, regional, and local conference venues. These materials include the "Active Galaxies" educator's guide and the TOPS "Far Out Math" and "Scale the Universe" guides.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynn@charmian.sonoma.edu.
Phone: 707-664-2655.

Primary URL: <http://glast.sonoma.edu>

Secondary

URL: <http://glast.sonoma.edu/edu.html>

Scientist(s):	Mr. Jeff Adkins	Deer Valley High School	Antioch, CA
	Ms. Shari Asplund	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Lynn Cominsky	Sonoma State University	Rohnert Park, CA
	Ms. Teena Della	Terry Fox Secondary School	Port Coquitlam, Canada
	Ms. Sharla Dowding	Newcastle High School	Newcastle, WY
	Mr. Mike Ford	Holton High School	Holton, KS
	Dr. Mary Garrett	Michigan Virtual High School	Lansing, MI
	Mr. Walter Glogowski	Ridgewood High School	Norridge, IL
	Mr. Tim Graves	Sonoma State University	Rohnert Park, CA
	Mr. Sean Greenwalt	Sonoma State University	Rohnert Park, CA
	Ms. Ellen Holmes	Bangor School Department	Bangor, ME
	Dr. Kevin McLin	Sonoma State University	Rohnert Park, CA
	Ms. Janet Moore	Challenger Learning Center at Prairie Aviation Museum	Bloomington, IL
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Darlette Powell	University of Washington	Seattle, WA
	Dr. Hartmut Sadrozinski	University of California, Santa Cruz	Santa Cruz, CA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA
	Mr. Daryl Taylor	Williamstown High School	Williamstown, NJ
	Dr. David Thompson	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Pamela Whiffen	Palo Verde Middle School	Phoenix, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	02 Oct 04	Arizona State University and the University of Arizona Trainer of Trainers—Tempe, AZ	62	0	0
07 Oct 04	07 Oct 04	University of Southern Maine—South Portland, ME	57	0	0

12 Oct 04	12 Oct 04	West 40 Intermediate Service Center No. 2— La Grange Park, IL	35	0	0
14 Oct 04	16 Oct 04	Illinois Council of Teachers of Mathematics Annual Conference—Springfield, IL	21	0	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	2134	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	26	0	0
16 Oct 04	16 Oct 04	Holton High School—Holton, KS	16	0	0
19 Oct 04	23 Oct 04	New England Science Teachers Retreat— Cambridge, MA	75	0	0
21 Oct 04	22 Oct 04	Montana Education Association/Montana Federation of Teachers Conference—Helena, MT	9	0	0
21 Oct 04	22 Oct 04	Montana Education Association/Montana Federation of Teachers Conference—Helena, MT	40	0	0
22 Oct 04	22 Oct 04	Mathematics Reloaded—Langley, Canada	50	0	0
28 Oct 04	30 Oct 04	Renaissance Visions: Connecting Mathematics— Detroit, MI	26	1000	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	2	0	0
13 Nov 04	13 Nov 04	Holton High School—Holton, KS	19	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	60	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	800	2200	0
20 Nov 04	20 Nov 04	University of New England—Beddeford, ME	48	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	50	0	0
07 Dec 04	07 Dec 04	University of Maine at Farmington— Farmington, ME	35	5	0
07 Jan 05	08 Jan 05	Wyoming Math and Science Teachers Conference—Casper, WY	3	0	0
07 Jan 05	08 Jan 05	Wyoming Math and Science Teachers Conference—Casper, WY	6	0	0
20 Jan 05	20 Jan 05	University of British Columbia— Vancouver, Canada	9	0	0
02 Feb 05	04 Feb 05	Hoosier Association of Science Teachers, Inc., Annual Convention—Indianapolis, IN	23	0	0
02 Feb 05	04 Feb 05	Hoosier Association of Science Teachers, Inc., Annual Convention—Indianapolis, IN	43	0	0
03 Feb 05	05 Feb 05	Space Exploration Educators Conference— Houston, TX	42	0	0
11 Feb 05	12 Feb 05	Science and Mathematics Educators Conference—Benson, AZ	30	0	0
13 Feb 05	15 Feb 05	2005 Governor's Conference on Career Education—Detroit, MI	45	0	0
21 Feb 05	21 Feb 05	Texas Christian University—Fort Worth, TX	30	0	0
24 Feb 05	26 Feb 05	National Afterschool Association— San Antonio, TX	300	2500	0
06 Mar 05	08 Mar 05	Wyoming Spring School Improvement Conference—Casper, WY	6	0	0
06 Mar 05	08 Mar 05	Wyoming Spring School Improvement Conference—Casper, WY	9	0	0
12 Mar 05	12 Mar 05	Holton High School—Holton, KS	18	0	0
16 Mar 05	18 Mar 05	Ignite Learning—Detroit, MI	65	0	0
16 Mar 05	18 Mar 05	Ignite Learning—Detroit, MI	85	0	0
21 Mar 05	23 Mar 05	3rd High-Energy Astrophysics Workshop for Amateur Astronomers—Las Cruces, NM	38	0	0
30 Mar 05	01 Apr 05	International Education—Raleigh, NC	52	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	12	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	25	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	28	0	0
10 Apr 05	12 Apr 05	Blazar Variability II: Entering the Gamma-ray Large Area Space Telescope (GLAST) Era— North Miami, FL	3	0	0

13 Apr 05	13 Apr 05	Florida A&M University—Tallahassee, FL	10	0	0
19 Apr 05	19 Apr 05	Deer Valley High School—Antioch, CA	7	0	0
09 May 05	13 May 05	Intel International Science and Engineering Fair— Phoenix, AZ	30	5	0
01 Jul 05	01 Jul 05	Best Western Richmond Inn— Richmond, Canada	1	0	0
06 Jul 05	06 Jul 05	Simon Fraser University, Burnaby Mountain Campus—Burnaby, Canada	10	0	0
09 Jul 05	12 Jul 05	University of California, Santa Cruz— Santa Cruz, CA	8	0	0
15 Jul 05	15 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	15	0	0
24 Jul 05	28 Jul 05	2005 Penn State Workshops for Science Educators—University Park, PA	24	0	0
15 Aug 05	15 Aug 05	Hands-On Universe: Teacher Resource Agent Conference—Williams Bay, WI	25	0	0

A65. GLOBE Atmospheres Workshop

Theme(s): Heliophysics

Msn/Prgm: Aura[B3]

Description: NASA GSFC Visitor Center staff were introduced to the Global Learning and Observations to Benefit the Environment (GLOBE) Program's atmosphere investigations and field observation protocols with reference to the EOS Aura mission. The trainer was Irene Ladd, Ph.D., Co-PI (with Jack Fishman) of GLOBE's surface ozone investigation.

Lead: Ms. Jeannie Allen, Science Systems and Applications, Inc., Lanham, MD 20706.

E-mail: jeallen@pop900.gsfc.nasa.gov. Phone: 301-614-6457.

Primary URL: <http://www.globe.gov/>

Scientist(s):	Dr. Jack Fishman	NASA Langley Research Center	Hampton, VA
	Dr. Irene Ladd	NASA Langley Research Center	Hampton, VA
	Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
21 Jul 05	21 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	8	0	0

A66. GLOBE Workshops

Theme(s): Earth Science

Msn/Prgm: GLOBE[B17]

Description: Professional development workshops conducted by the GLOBE Program involve instruction in at least one of the GLOBE protocols in the areas of atmosphere, hydrology, phenology, soil moisture and temperature, soil characterization, and land cover. These workshops are multifaceted endeavors to train educators in the process of data collection, data entry and analysis, classroom implementation, and the development of learning activities. These workshops also highlight the importance of regional networking, inspiring and fostering student research, and collaboration within the GLOBE community. Workshops are conducted both domestically and internationally, organized by GLOBE partners in conjunction with the GLOBE Program Office. Additional support for GLOBE workshops comes from the community of GLOBE trainers, who have been certified to train others in designated protocol areas. Upon completion, teachers are authorized to begin entering data through the GLOBE Web site. In 2005, 270 workshops were conducted at the University Corporation for Atmospheric Research.

Lead: Dr. Teresa Kennedy, University Corporation for Atmospheric Research, Boulder, CO 80305.

E-mail: tkennedy@globe.gov.

Contact: Dr. Teresa Kennedy, University Corporation for Atmospheric Research, Boulder, CO 80305.

E-mail: tkennedy@globe.gov.

Primary URL: <http://www.globe.gov>

Secondary

URL: <http://www.globe.gov/fsl/workshop/registration.pl?lang=en&nav=1>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	University Corporation for Atmospheric Research—Boulder, CO	3556	0	0

A67. GRACE: California Science Educator Conference

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: GRACE materials and information were distributed to educators attending the California Science Education Conference. K–12 educational activities for use in the classroom were distributed, along with GRACE lithos, CDs, and mission information.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Partner(s): NASA Jet Propulsion Laboratory Educator Resource Center

Pomona, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	500	0

A68. GRACE: NASA Space Education Workshop

Theme(s): Planetary

Msn/Prgm: GRACE[B4]

Description: Preservice and inservice educators participated in space education activities matched to the national and State education standards to increase their ability to conduct hands-on activities with students. Topics included gravity, remote sensing, modeling the solar system, early childhood education, and NASA's Glovebox.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Partner(s): Texas Cooperative Extension, College Station, TX

A69. GRACE: National Science Teachers Association Workshop

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: GRACE master teachers conducted an educational workshop on gravity for 70 attendees and provided educational materials at an exhibit during the National Science Teachers Association meeting in Dallas, TX. During the workshop, participants received background information on the GRACE mission, participated in hands-on activities from the GRACE curriculum, and watched animations of how the GRACE satellites operate.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Secondary

URL: <http://www.tsgc.utexas.edu>

Partner(s): National Science Teachers Association

Seattle, WA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	70	0	0

A70. GRACE: Science Teacher Association of Texas

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Two thousand five hundred science educators from Texas attended the statewide Texas Science Teacher Association meeting in Corpus Christi, TX. The GRACE education team, including master teachers and program coordinators, conducted a workshop on gravity for 50 attendees. Educator participants received GRACE background information, gravity lessons, and hands-on activities to conduct in the classroom in addition to the opportunity to try these activities while at this workshop. The activities that support the GRACE mission were developed by the GRACE master teacher team to instruct students about Earth science, gravity, satellites, and NASA Earth-observing satellites.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu/spacevision>

Secondary

URL: <http://www.tsgc.utexas.edu/>

Partner(s): National Science Teachers Association

Arlington, VA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	50	0	0

A71. GRACE: Space Education Workshop

Theme(s): Planetary

Msn/Prgm: GRACE[B4]

Description: Preservice and inservice space education training was provided to 27 teachers attending the 2-day space educator workshop held at the University of Texas (UT) Center for Space Research. NASA AESP staff and the GRACE E/PO chair provided lesson plans and activities for use in the classroom and in the after-school science program through the Texas Cooperative Extension Service 4-H CAPITAL Program.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Partner(s): Texas Cooperative Extension

College Station, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
22 Sep 05	23 Sep 05	University of Texas at Austin—Austin, TX	27	0	0

A72. GRACE: Space Exploration Educators Conference

Theme(s): Planetary
 Msn/Prgm: GRACE[B4]
 Description: Educators attending the Space Exploration Educators Conference attended a workshop sponsored by the Texas Space Grant Consortium (TSGC) in which NASA missions were covered. Activities included hands-on lessons from the Mars and GRACE missions. Educators attending left with educational materials, background data, and experiential learning modules matched to the national and State education standards.
 Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu. Phone: 512-471-6922.
 Primary URL: <http://www.csr.utexas.edu/grace>
 Secondary URL: <http://www.tsgc.utexas.edu>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
03 Feb 05	05 Feb 05	Space Exploration Educators Conference—Houston, TX	45	0	0

A73. Hands-On Astronomy for Elementary and Middle School Teachers in Rural North Carolina

Theme(s): Astrophysics
 Msn/Prgm: SRT[B28]
 Description: The research themes of Dr. Ellison's research group were extended through Hands-On Astronomy teacher training workshops that were offered to teachers in rural western North Carolina. These encouraged teachers to employ a more inquiry-based approach to the astronomy-related topics taught in the North Carolina Standard Course of Study in grades 3, 6, and 8. The workshops were offered through a partnership with two western regional offices of The Science House and local schools.
 Contact: Dr. David Haase, North Carolina State University, Raleigh, NC 27695. E-mail: david_haase@ncsu.edu. Phone: 919-515-6118.
 Primary URL: <http://www.science-house.org>
 Secondary URL: <http://www.science-house.org/info/asheville/astro.html>
 Scientist(s): Dr. Don Ellison North Carolina State University Raleigh, NC
 Dr. David Haase North Carolina State University Raleigh, NC
 Partner(s): Pisgah Astronomical Research Institute Rosman, NC

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
11 Mar 05	12 Mar 05	Science House Western Regional Office, The—Lenoir, NC	22	0	0
15 Apr 05	16 Apr 05	Science House, The—Asheville, NC	17	0	0

A74. HEASARC: General Educator Workshops

Theme(s): Astrophysics
 Msn/Prgm: HEASARC[B65]
 Description: These workshop presentations cover general information about the programs, products, and science objectives of the High Energy Astrophysics Science Archive Research Center (HEASARC). Participants learn about topics and activities to use in their classrooms. The content of an individual workshop is tailored to the level and needs of the audience and venue. Workshops are presented by E/PO professionals and the HEASARC Educator Ambassador.
 Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.
 Primary URL: <http://imagine.gsfc.nasa.gov>
 Secondary URL: <http://epo.sonoma.edu/ambassadors>
 Scientist(s): Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Cheryl Niemela Rogers High School Puyallup, WA
 Partner(s): Sonoma State University Rohnert Park, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
25 Feb 05	25 Feb 05	NASA Goddard Space Flight Center—Greenbelt, MD	21	0	0
12 Mar 05	12 Mar 05	Museum of Flight—Seattle, WA	18	0	0

A75. Hera: NASA Data Analysis in Your Classroom

Theme(s): Astrophysics
 Msn/Prgm: HEASARC[B65], ACE[B73]
 Description: This educator workshop introduces participants to the Hera software, which allows students to manipulate and explore real NASA satellite data using the same files, tools, and procedures that astrophysicists use. The software and procedures are demonstrated, with background information on the astronomical object and files that students will explore.
 Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.
 Primary URL: <http://imagine.gsfc.nasa.gov/docs/teachers/hera/>
 Scientist(s): Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Sara Mitchell NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	14	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	7	0	0

A76. "Hidden Lives of Galaxies": Educator Workshop

Theme(s): Astrophysics
 Msn/Prgm: HEASARC[B65]
 Description: This educator workshop presents teachers with information about galaxies and how we see them at different wavelengths. Participants view a presentation and engage in group discussion and activities about the different types of galaxies and other related topics. These workshops were conducted by E/PO professionals and the HEASARC Educator Ambassador.
 Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.
 Primary URL: <http://imagine.gsfc.nasa.gov>
 Secondary URL: <http://epo.sonoma.edu/ambassadors>
 Scientist(s): Dr. Julie Lutz University of Washington Seattle, WA
 Ms. Cheryl Niemela, Rogers High School Puyallup, WA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	02 Oct 04	Teaching to Transform Culture Educator Convention—Portland, OR	95	10	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	81	0	0
12 Feb 05	12 Feb 05	Rogers High School—Puyallup, WA	15	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	38	42	0

A77. IMAGE: "Ancient Observatories: Timeless Knowledge"

Theme(s): Heliophysics, Planetary
 Msn/Prgm: SECEF[B36], IMAGE[B75]
 Description: Dr. Sten Odenwald cohosted a NASA-CONNECT television program on Ancient Observatories. This program allowed IMAGE to reach millions of students and to help teachers develop and implement novel classroom activities.
 Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.
 Primary URL: <http://connect.larc.nasa.gov/>
 Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD
 Partner(s): NASA Langley Research Center Hampton, VA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 Mar 05	17 Mar 05	NASA Langley Research Center—Hampton, VA	0	7300000	0

A78. IMAGE: Teacher Workshops and Conferences

Theme(s): Heliophysics
 Msn/Prgm: SECEF[B36], IMAGE[B75]
 Description: This effort (1) provides teachers with state-of-the-art knowledge about space science, (2) enhances teacher understanding of physical science topics within the space science theme, (3) provides hands-on demonstrations of classroom activities and projects that will help students understand space science concepts, and (4) supports NASA/SECEF and the Student Observation Network.
 Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.
 Scientist(s): Dr. Patricia Reiff Rice University Houston, TX

Partner(s): NASA Goddard Space Flight Center

Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
18 Nov 04	18 Nov 04	NASA Earth and Space Educators Workshop—Houston, TX	40	0	0
22 Jan 05	22 Jan 05	Redd School—Houston, TX	70	0	0
27 Jan 05	27 Jan 05	Northwest Intermediate School—Houston, TX	25	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	1380	0	0
23 May 05	27 May 05	American Geophysical Union Annual Summer Meeting—New Orleans, LA	40	0	0

A79. Immersive Earth: Conference Demonstrations

Theme(s): Heliophysics

Msn/Prgm: Immersive Earth[B18], MMS[B86]

Description: This activity involves demonstrations of Earth and space science topics on a portable planetarium dome at conferences and includes exhibit booths or workshops where NASA materials and activities are demonstrated. Full immersive planetarium shows may be shown or just clips of relevant individual topics.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Kerry Handron, Carnegie Museum of Natural History, Pittsburgh, PA 15213.

E-mail: HandronK@CarnegieMNH.Org. Phone: 412-578-2580.Primary URL: <http://earth.rice.edu>

Secondary

URL: <http://www.e-planetarium.com>

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX
 Dr. Carolyn Sumners Houston Museum of Natural Science Houston, TX

Partner(s): Houston Museum of Natural Science Houston, TX
 LodeStar Astronomy Center Albuquerque, NM
 Louisiana Art and Science Museum Baton Rouge, LA
 Oregon Museum of Science and Industry Portland, OR

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	800	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	1200	0	0
28 Jun 05	30 Jun 05	NASA's Earth Science Technology Conference 2005—College Park, MD	120	0	0
06 Aug 05	10 Aug 05	American Association of Physics Teachers—Salt Lake City, UT	400	0	0

A80. Immersive Earth: Demonstrations for Education Professionals

Theme(s): Earth Science

Msn/Prgm: Immersive Earth[B18]

Description: Immersive Earth demonstrates products to education professionals to inform and highlight the standard alignment, ease of use, and effectiveness in a classroom setting.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.Primary URL: <http://earth.rice.edu>

Scientist(s): Dr. Kerry Handron Carnegie Museum of Natural History Pittsburgh, PA
 Dr. Patricia Reiff Rice University Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Oct 04	16 Oct 04	Houston Museum of Natural Science—Houston, TX	350	0	0
18 Nov 04	18 Nov 04	NASA Johnson Space Center—Houston, TX	40	10	0
22 Jan 05	22 Jan 05	Redd School—Houston, TX	70	10	0
27 Jan 05	27 Jan 05	Northwest Intermediate School—Houston, TX	25	0	0
19 Sep 05	19 Sep 05	West Allegheny School District—Imperial, PA	17	0	0

A81. "Invisible Universe": Teacher Workshops

Theme(s): Astrophysics

Msn/Prgm: Swift[B57]

Description: Swift Educator Ambassadors and E/PO professionals use materials developed by the Swift project to conduct teacher workshops at national, regional, and local conference venues. The Great Explorations in Math and Science (GEMS) guide "Invisible Universe: From Radio Waves to Gamma Rays" is a frequent focus of these workshops.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynncc@charmian.sonoma.edu. Phone: 707-664-2655.

Primary URL: <http://swift.sonoma.edu>

Secondary

URL: <http://swift.sonoma.edu/education/index.html>

Scientist(s):	Mr. Thomas Arnold	State College High School	State College, PA
	Ms. Shari Asplund	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David Beier	Hawthorn Hill Elementary School	Lee's Summit, MO
	Dr. Neil Brandt	Pennsylvania State University	University Park, PA
	Dr. Jane Charlton	Pennsylvania State University	University Park, PA
	Mr. Sean Greenwalt	Sonoma State University	Rohnert Park, CA
	Ms. Bruce Hemp	Fort Defiance High School	Fort Defiance, VA
	Mr. Erich Landstorm	Boynton Beach Community High School	Boynton Beach, FL
	Dr. Michelle Larson	Pennsylvania State University	University Park, PA
	Ms. Rae McEntyre	Gallatin County High School	Warsaw, KY
	Ms. Janet Moore	Challenger Learning Center at Prairie Aviation Museum	Bloomington, IL
	Dr. John Nousek	Pennsylvania State University	University Park, PA
	Dr. Christopher Palma	Pennsylvania State University	University Park, PA
	Ms. Angela Phelps	Pennsylvania Space Grant Consortium	University Park, PA
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Darlette Powell	University of Washington	Seattle, WA
	Dr. Donald Schneider	Pennsylvania State University	University Park, PA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA
	Ms. Linda Smith	Paulsboro Public Schools	Pittsgrove, NJ
	Mr. Robert Sparks	Prairie School	The Racine, WI
Partner(s):	Pennsylvania State University		University Park, PA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	2134	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	9	0	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	73	0	0
23 Oct 04	26 Oct 04	MOREnet and Missouri Department of Elementary and Secondary Education—Osage Beach, MO	45	0	0
30 Oct 04	30 Oct 04	Mathematics: Governing the Future—Kentucky, KY	24	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	22	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	35	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	48	0	0
13 Nov 04	13 Nov 04	Master Teacher Training Camp: National Teacher Training Institute—Harrisonburg, VA	11	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	800	2200	0
18 Nov 04	20 Nov 04	Racing Toward Proficiency: No Teacher Left Behind—Lexington, KY	8	0	0
18 Nov 04	20 Nov 04	Racing Toward Proficiency: No Teacher Left Behind—Lexington, KY	18	0	0
01 Dec 04	03 Dec 04	Pennsylvania Science Teachers Association Conference—Hershey, PA	15	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	16	0	0
10 Dec 04	12 Dec 04	State College Area High School—State College, PA	18	0	0
08 Jan 05	12 Jan 05	American Association of Physics Teachers—Albuquerque, NM	25	0	0
03 Feb 05	05 Feb 05	Space Exploration Educators Conference—Houston, TX	27	0	0
24 Feb 05	26 Feb 05	National Afterschool Association—San Antonio, TX	300	2500	0
03 Mar 05	06 Mar 05	Kentucky Teaching and Learning Conference—Louisville, KY	8	0	0
03 Mar 05	06 Mar 05	Kentucky Teaching and Learning Conference—Louisville, KY	18	0	0

30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	12	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	15	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	24	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	35	0	0
02 Apr 05	02 Apr 05	Space Day at Penn State—University Park, PA	0	500	0
08 Apr 05	09 Apr 05	Blue Ridge East Teacher Training Institute—Cloverdale, VA	22	1	0
14 Apr 05	16 Apr 05	Wisconsin Society of Science Teachers Annual Convention—La Cross, WI	22	0	0
28 Apr 05	28 Apr 05	Spring Science Education Workshop—State College, PA	16	0	0
13 May 05	13 May 05	Central High School—Kansas City, MO	27	0	0
29 Jun 05	29 Jun 05	Blue Ridge West Teacher Training Institute—Bristol, VA	18	0	0
17 Jul 05	29 Jul 05	Pennsylvania State University—University Park, PA	43	0	0
18 Jul 05	22 Jul 05	Connecting Learning Communities—Parkville, MO	35	0	0

A82. Kepler: Teacher Workshops on Planet Finding

Theme(s): Astrophysics

Msn/Prgm: Kepler[B50]

Description: Kepler mission staff and scientists lead and make presentations at teacher workshops. The main goal is to promote understanding and awareness of the Kepler mission's search for habitable planets.

Lead: Mr. Alan Gould, Lawrence Hall of Science, Berkeley, CA 94720-5200. E-mail: agould@uclink4.berkeley.edu. Phone: 510-643-5082.

Contact: Dr. Edna DeVore, Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, CA 94043.

Primary URL: <http://www.lawrencehallofscience.org/kepler>

Scientist(s): Ms. Edna DeVore

Search for Extraterrestrial Intelligence
(SETI) Institute
Lawrence Hall of Science

Mountain View, CA
Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
07 Mar 05	09 Mar 05	Lawrence Hall of Science—Berkeley, CA	25	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	30	0	0

A83. Landsat: Teacher Workshops

Theme(s): Earth Science

Msn/Prgm: LDCM[B5]

Description: Half-day and full-day teacher workshops highlight the value and use of Landsat data in the classroom. Remote sensing basics, the use of remote sensing in geography, and science, as well as application of this information to everyday problem solving, are taught. Teachers are provided with background information and several hands-on classroom activities that employ land remote sensing images and data. The use of these tools and techniques is encouraged to teach students how to quantify landscape changes through time, especially through the use of local data.

Lead: Ms. Anita Davis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. Phone: 301-614-6669.

Primary URL: <http://landsat.gsfc.nasa.gov>

Secondary URL: <http://ldcm.gsfc.nasa.gov>

Scientist(s): Ms. Anita Davis

NASA Goddard Space Flight Center

Greenbelt, MD
Ellicott City, MD

Partner(s): Howard County Public Schools

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
27 Jul 05	29 Aug 05	Bridging the Watershed—Accokeek, MD	50	0	0

A84. Laser Interferometer Space Antenna (LISA) Educator Ambassador Workshop

Theme(s): Astrophysics

Msn/Prgm: LISA[B51]

Description: LISA Educator Ambassadors are part of the SEU Educator Ambassador program, coordinated by the Sonoma State University E/PO group. All the Educator Ambassadors are trained biyearly to help develop, test, disseminate, and give workshops for teachers that feature materials from all the SEU missions.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
 Phone: 707-664-2655.
 Primary URL: <http://epo.sonoma.edu/ambassadors>
 Secondary URL: <http://lisa.nasa.gov/>
 Scientist(s): Ms. Mandy Frantti Munising Public Schools Munising, MI
 Mr. Sean Greenwalt Sonoma State University Rohnert Park, CA
 Mr. Erich Landstorm Boynton Beach Community High School Boynton Beach, FL
 Dr. Philip Plait Sonoma State University Rohnert Park, CA
 Ms. Sarah Silva Sonoma State University Rohnert Park, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Oct 04	08 Oct 04	Seaborg Center Annual Fall Conference—Marquette, MI	50	0	0
14 Oct 04	16 Oct 04	Florida Association of Science Teachers Annual Meeting—Orlando, FL	5	0	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	2135	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	45	0	0
21 Jun 05	21 Jun 05	Saginaw Valley State University—University Center, MI	32	0	0

A85. LiftOff Summer Institute

Theme(s): Earth Science
 Msn/Prgm: GRACE[B4]
 Description: Thirty-one teachers from eight States attended the weeklong LiftOff Summer Institute sponsored by the Texas Space Grant Consortium at Johnson Space Center. This train-the-trainer workshop provides educators with up-to-date information and materials on NASA missions and discoveries while providing the opportunity to interact with NASA engineers and scientists. GRACE curriculum and materials were distributed to all participants for their use in training other teachers and in conducting educational activities in the classroom and communities.
 Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
 Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu/liftoff>
 Secondary URL: <http://www.csr.utexas.edu/grace>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
11 Jul 05	15 Jul 05	University of Texas at Austin—Austin, TX	31	0	0

A86. Living With a Star (LWS): Inservice Teachers Workshop

Theme(s): Heliophysics
 Msn/Prgm: LWS/PO[B90]
 Description: Scientists, engineers, and STP/LWS E/PO specialists from NASA GSFC conduct inservice workshops for K–16 science and nonscience educators in different locations: Washington, DC; Puerto Rico; and Massachusetts. The workshops include a wide variety of educational themes related to the STP/LWS programs and the STEM subjects aligned with the national content standard.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary URL:

URL: <http://stp.gsfc.nasa.gov>

Scientist(s): Mr. Omar Eaton NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Evelina Felicite-Maurice NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Florence Tan NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
12 Jan 05	15 Jan 05	Springfield High School of Science and Technology—Springfield, MA	110	0	0

A87. Living with a Star (LWS): Master Teacher Leadership and Mentor Program

Theme(s): Heliophysics
 Msn/Prgm: LWS/PO[B90]
 Description: The STP/LWS Master Teacher Leadership and Mentor (MTLM) Program is designed to give guidance to K–16 teachers from the mainland and Puerto Rico in science literacy, new technology, and STEM teaching trends. Master teachers serve as mentors and coaches during the school year for the STP/LWS Star Partners participants. MTLM conducts yearly nationwide meetings. This year's meeting was in Charleston, SC.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: efelicit@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary URL: <http://stp.gsfc.nasa.gov>

Scientist(s): Ms. Sara Brown NASA Goddard Space Flight Center Greenbelt, MD
Dr. Evelina Felicite-Maurice NASA Goddard Space Flight Center Greenbelt, MD
Dr. Charles Mercer NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
13 Apr 05	16 Apr 05	NASA Goddard Space Flight Center— Greenbelt, MD	29	2	0

A88. Living With a Star (LWS): Preservice Workshop

Theme(s): Heliophysics
Msn/Prgm: LWS/PO[B90]
Description: University of Puerto Rico (UPR) professors, scientists, E/PO specialists, and engineers from GSFC conduct preservice workshops for K–16 science and nonscience students. These workshops cover the STEM subjects of oceanography and meteorology; they are aligned with national content standards.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: efelicit@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary URL:

URL: <http://stp.gsfc.nasa.gov>

Scientist(s): Ms. Sara Brown NASA Goddard Space Flight Center Greenbelt, MD
Dr. Evelina Felicite-Maurice NASA Goddard Space Flight Center Greenbelt, MD
Dr. Juan Gonzalez University of Puerto Rico at Mayagüez Mayagüez, Puerto Rico
Dr. Charles Mercer NASA Goddard Space Flight Center Greenbelt, MD
Dr. Rafael Montalvo University of Puerto Rico at Mayagüez Mayagüez, Puerto Rico
Ms. Maria Schwarz University of Puerto Rico at Mayagüez Mayagüez, Puerto Rico

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
10 Jan 05	16 Jan 05	University of Puerto Rico at Mayagüez— Mayagüez, Puerto Rico	0	30	0

A89. Mars: Formal Educator Workshops

Theme(s): Planetary
Msn/Prgm: Mars Public Engagement[B97]
Description: These workshops provide K–12 educators with interactive teaching experiences and resources for standards-aligned, hands-on, inquiry-based, low-cost classroom activities that support science, technology, engineering, and mathematics concepts related to Mars exploration. They are conducted at locations around the country and at major education conferences. The complementary goals, science discoveries, and technological innovation of missions in the Mars Exploration Program are also presented in relation to what NASA hopes to learn about Mars through long-term exploration of the climate and geology of the Red Planet and its potential as a habitat for past, present, and future life. The educational knowledge and skills necessary to explore Mars are also presented to assist educators in inspiring Mars explorers of the future. Classroom activities and resources are distributed for implementation in the classroom.

Contact: Ms. Sheri Klug, Arizona State University, Tempe, AZ 85287-1404. E-mail: sklug@asu.edu.
Phone: 480-727-6495.

Primary URL: <http://mars.jpl.nasa.gov/classroom>

Secondary URL:

URL: <http://marsed>

Scientist(s): Mr. Jaime Ahumada Arizona State University Tempe, AZ
Dr. Carlton C. Allen NASA Johnson Space Center Houston, TX
Ms. Jaclyn Allen Lockheed Martin Corporation Houston, TX
Mr. Scott Allison Arizona State University Tempe, AZ
Mr. Erik Bailey NASA Jet Propulsion Laboratory Pasadena, CA
Ms. Jennifer Ballestrea Arizona State University Tempe, AZ
Dr. Josh Bandfield Arizona State University Tempe, AZ
Ms. Kelly Bender Arizona State University Tempe, AZ
Ms. Diane Bollen Cornell University Ithaca, NY
Mr. Robert Bonitz NASA Jet Propulsion Laboratory Pasadena, CA
Mr. Kobie Boykins NASA Jet Propulsion Laboratory Pasadena, CA
Dr. John Callas NASA Jet Propulsion Laboratory Pasadena, CA
Dr. Michael Caplinger Malin Space Science Systems La Jolla, CA
Ms. Brooke Carson Keystone Science Institute Keystone, CO
Dr. Phil Christensen Arizona State University Tempe, AZ
Ms. Rebecca Collier NASA Johnson Space Center Houston, TX

Ms. Mary Davis	Arizona State University	Tempe, AZ
Mr. Ramon Depaula	NASA Headquarters	Washington, DC
Ms. Tracy Drain	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Mary Drake	NASA Johnson Space Center	Houston, TX
Mr. Thomas Duxbury	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Jaime Dyk	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Chris Eisinger	Arizona State University	Tempe, AZ
Ms. Tara Fisher	Arizona State University	Tempe, AZ
Mr. Anthony Ganino	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Michael Garrett	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Tim Glotch	Arizona State University	Tempe, AZ
Mr. Brian Gootee	Arizona State University	Tempe, AZ
Dr. Virginia Gulick	NASA Ames Research Center	Moffett Field, CA
Mr. Michael Henry	Lockheed Martin Corporation	Houston, TX
Ms. Meg Hufford	Arizona State University	Tempe, AZ
Mr. Peter Illsley	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Laszlo Keszthelyi	U.S. Geological Survey	Flagstaff, AZ
Ms. Meggin Kirk	Arizona State University	Tempe, AZ
Ms. Sheri Klug	Arizona State University	Tempe, AZ
Ms. Amy Knudson	Arizona State University	Tempe, AZ
Ms. Stephanie Lear	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Fuk Li	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Loresa Loftin	Lockheed Martin Corporation	Houston, TX
Mr. Douglas Lombardi	University of Arizona	Tucson, AZ
Mr. Anthony Maldonado	Arizona State University	Tempe, AZ
Mr. Rob Manning	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Thomas McCarthy	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Dan McCleese	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Doug McCuiston	NASA Headquarters	Washington, DC
Mr. Gaylon McSmith	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Michael Meyer	NASA Headquarters	Washington, DC
Dr. Scott Murchie	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Mary Beth Murrill	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Rino Passaniti	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Ellen Reid	Keystone Science Institute	Keystone, CO
Mr. Benjamin Riggs	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Deanne Rogers	Arizona State University	Tempe, AZ
Mr. James Rose	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Steve Ruff	Arizona State University	Tempe, AZ
Dr. Steve Saunders	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Zach Schimke	Arizona State University	Tempe, AZ
Ms. Cammy Skiba	Arizona State University	Tempe, AZ
Ms. Anne Smith	Lockheed Martin Corporation	Houston, TX
Ms. Karen Stocco	Pasadena Independent School District	Pasadena, TX
Mr. Pete Theisinger	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Benjamin Thoma	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
Ms. Paige Valderrama	Arizona State University	Tempe, AZ
Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Keith Watt	Arizona State University	Tempe, AZ
Ms. Aimee Whalen	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Shawn Wright	Arizona State University	Tempe, AZ
Dr. Rich Zurek	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
30 Sep 04	02 Oct 04	Arizona Science Teachers Annual Conference—Mesa, AZ	22	0	0
08 Oct 04	08 Oct 04	Sacred Hearts Academy—Honolulu, HI	31	100	0
09 Oct 04	09 Oct 04	Arizona State University—Tempe, AZ	12	0	0
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	95	50	0
05 Nov 04	05 Nov 04	Challenger Space Center—Peoria, AZ	75	0	0
06 Nov 04	06 Nov 04	Challenger Space Center—Peoria, AZ	45	0	0
15 Jan 05	15 Jan 05	Noble Planetarium—Fort Worth, TX	12	0	0
28 Jan 05	28 Jan 05	North Carolina Museum of History—Raleigh, NC	70	0	0
04 Feb 05	04 Feb 05	Space Center Houston—Houston, TX	51	0	0

11 Feb 05	11 Feb 05	Mountain View Elementary School— Harker Heights, TX	52	0	0
19 Feb 05	19 Feb 05	New Detroit Science Center—Detroit, MI	56	0	0
21 Feb 05	21 Feb 05	Cornell University—Ithaca, NY	30	0	0
24 Feb 05	24 Feb 05	Arizona State University—Tempe, AZ	43	0	0
26 Feb 05	26 Feb 05	Arizona State University—Tempe, AZ	156	0	0
05 Mar 05	05 Mar 05	Arizona State University—Tempe, AZ	37	0	0
05 Mar 05	05 Mar 05	Exploration Place—Wichita, KS	80	0	0
15 Mar 05	15 Mar 05	Arizona State University—Tempe, AZ	28	0	0
19 Mar 05	19 Mar 05	Montana State University—Billings, MT	33	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	86	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	170	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	10	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	16	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	28	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	45	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	46	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	49	0	0
09 Apr 05	09 Apr 05	Clearfield High School—Clearfield, UT	35	0	0
13 Jun 05	17 Jun 05	Arizona State University—Tempe, AZ	22	0	0
14 Jun 05	14 Jun 05	NASA Langley Research Center—Hampton, VA	32	0	0
20 Jun 05	20 Jun 05	NASA Langley Research Center—Hampton, VA	30	0	0
12 Jul 05	12 Jul 05	NASA Johnson Space Center—Houston, TX	32	0	0
21 Jul 05	21 Jul 05	NASA Johnson Space Center—Houston, TX	34	0	0
28 Jul 05	28 Jul 05	University of Texas at Brownsville— Brownsville, TX	13	0	0
09 Aug 05	10 Aug 05	Doubletree Hotel—Cocoa Beach, FL	57	0	0
10 Aug 05	10 Aug 05	NASA Kennedy Space Center Visitor Center— Kennedy Space Center, FL	12	0	0
18 Aug 05	19 Aug 05	Southeast Middle School—Kernersville, NC	60	0	0
24 Sep 05	24 Sep 05	Arizona State University—Tempe, AZ	136	0	0

A90. Maryland Science Center SpaceLink Teachers' Thursdays

Theme(s): Planetary
Msn/Prgm: MARSSB[B39]
Description: Teachers' Thursdays programs offer educators a chance to discuss the latest in the field of science and take lessons back to the classroom. Teachers attending eight Teachers' Thursdays programs earn one Maryland State Department of Education Continuing Professional Development Credit.
Lead: Mr. Flavio Mendez, Maryland Science Center, Baltimore, MD 21230. E-mail: mendez@mdsci.org.
Phone: 410-545-5995.
Contact: Dr. Stanley Jones, Center for Educational Technologies, Wheeling, WV 26003.
E-mail: sjones@cet.edu.
Primary URL: <http://marssb.cet.edu/>

Secondary
URL: <http://www.mdsci.org/exhibits/>

Scientist(s): Dr. John Carlson University of Maryland College Park, MD
Dr. Frank Summers Space Telescope Science Institute Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 Feb 05	17 Feb 05	Center for Educational Technologies— Wheeling, WV	7	4	0
21 Apr 05	21 Apr 05	Center for Educational Technologies— Wheeling, WV	5	52000	0

A91. "Measuring Vegetation Health": Educator Workshops

Theme(s): Earth Science
Msn/Prgm: Measuring Vegetation Health[B19]

Description: The goals of the Measuring Vegetation Health project are to help people understand and apply the scientific principles of light so they may use available technologies to collect valuable information about their surroundings, to integrate these data with other remote sensing data, and then to build an integrated story of their environment. These stories may be shared to help enrich our understanding of environmental change across multiple scales of time and space. Seven collaborating institutions are developing, refining, and distributing a flexible set of hands-on activities and resources for students and the general public to learn how to monitor vegetation health in their own environment with technologies that detect and manipulate light. The materials have multiple entry points and are modular so that they may be used for focused learning of just a few concepts or for more comprehensive learning that deals with complex systems.

Lead: Mr. Brian Rogan, Museum of Science, Boston, MA 02114-1099. E-mail: brogan@mos.org.
Phone: 617-589-4252.

Primary URL: <http://mvh.sr.unh.edu/>

Secondary URL:

URL: <http://www.forestwatch.sr.unh.edu/>

Partner(s): Lawrence Hall of Science
University of Southern Maine

Berkeley, CA
South Portland, ME

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Jun 05	10 Jun 05	Indiana State University—Terre Haute, IN	10	0	0

A92. MESSENGER Educator Fellowship Program

Theme(s): Planetary

Msn/Prgm: MESSENGER[B109]

Description: The MESSENGER Education and Outreach Program Team is implementing a nationwide teacher training initiative whereby a cadre of 30 Fellows-master science teachers at the elementary, middle, and high school levels will conduct educator workshops nationally, training up to 27,000 grade pre-K through 12 educators over the mission lifetime. Training will be conducted on concept-based, inquiry-driven lessons developed by the MESSENGER education team. Forming the core of the MESSENGER Education Modules (MEMS), these standards-based lessons address solar system science, planetary observations through history, and the engineering associated with building and sending a spacecraft to another world. Additional MEMS lessons will highlight other NASA solar system exploration missions.

Lead: Ms. Stephanie Stockman, Science Systems and Applications, Inc., Lanham, MD 20706. Phone: 301-614-6457.

Primary URL: <http://btc.montana.edu/messenger/teachers/fellows.htm>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
29 Jun 05	01 Jul 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	8	0	0
18 Aug 05	23 Aug 05	National Center for Space, Earth, and Flight Sciences Education (NCSEFSE)—Washington, DC	6	0	0

A93. Midwestern Science Teachers Meetings

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: DePaul B/F[B37]

Description: The primary goal of this activity is to advertise our presence as the regional point of contact for K–12 educators. The secondary goal is to inform educators about new NASA space science E/PO materials. The activity is used to network with teachers and associations that are identified as potential program partners. Finally, these meetings are used to better understand the teachers being served and their needs.

Lead: Ms. Tamra Gentry, DePaul University, Chicago, IL 60604. E-mail: tgentry@depaul.edu. Phone: 773-325-4516.

Scientist(s): Ms. Tamra Gentry
DePaul University
Chicago, IL

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	0	300	0

A94. NASA Preservice Teacher Conference

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: ASO[B33], SECEF[B36], MARSSB[B39]

Description: The NASA Langley Pre-Service Teacher Program (PSTP) is a partnership between the Langley Office of Education and Norfolk State University's School of Science & Technology. The aim of the program is to provide preservice teachers and faculty members with opportunities to enhance their knowledge and skill in teaching mathematics and science using technology at the elementary and middle school levels. The Pre-Service Teacher Conference (PSTC) is held each spring and hosts 600 to 700 elementary and middle school prospective teachers from selected Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges and Universities (TCUs), and some majority institutions. Students and faculty are exposed to invigorating general sessions and hands-on workshops. The PSTC culminates with a career day in which students have the opportunity to interview with recruiters from public schools and graduate schools from across the country. The Mid-Atlantic Region Space Science Broker (MARSSB) presented two faculty workshops at the

10th Annual NASA Pre-Service Teacher Conference in Alexandria, VA. MARSSB also brokered workshops by two SMD forum representatives.

Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.

E-mail: lruberg@cet.edu. Phone: 304-243-2480.

Contact: Dr. Adriane Dorrington, NASA Langley Research Center, Hampton, VA 23681.

E-mail: a.e.dorrington@larc.nasa.gov. Phone: 757-864-2380.

Primary URL: <http://edu.larc.nasa.gov/pstc/overview.html>

Secondary

URL: <http://marssb.cet.edu>

Scientist(s):	Dr. Joseph Busche	Wheeling Jesuit University	Wheeling, WV
	Ms. Bonnie Eisenhamer	Space Telescope Science Institute	Baltimore, MD
	Mr. Dan McCallister	Space Telescope Science Institute	Baltimore, MD
	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Feb 05	19 Feb 05	NASA Pre-Service Teacher Conference— Alexandria, VA	5	0	0
17 Feb 05	19 Feb 05	NASA Pre-Service Teacher Conference— Alexandria, VA	20	0	0

A95. New England Workshops in Space Science Education

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: Intensive workshops in space science education play a vital role in enhancing the content knowledge and pedagogical capabilities of educators. This year, NESSIE partnered with several workshop providers with the aim of brokering greater involvement in E/PO by space scientists and facilitating more comprehensive services for K-12 teachers and community educators. Some workshops were based on the highly successful Project ASTRO and Family ASTRO models, where scientists and educators are trained together for subsequent collaborations in the classroom and other community venues. NESSIE personnel also contributed to workshops hosted by the Fulcrum Institute at Tufts University, the Harvard-Smithsonian Center for Astrophysics, the Museum of Science, and Halibut Point State Park.

Lead: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: cclemens@mos.org. Phone: 617-589-0227.

Primary URL: <http://www.mos.org/nessie>

Secondary

URL: <http://hea-www.harvard.edu/astro/index.html>

Scientist(s):	Ms. Cathleen Clemens	Museum of Science	Boston, MA
	Dr. Teon Edwards	TERC	Cambridge, MA
	Dr. Nancy Evans	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Edward Ginsberg	University of Massachusetts, Boston	Boston, MA
	Ms. Ellen Holmes	Bangor School Department	Bangor, ME
	Dr. Vinay Kashyap	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Kathleen Kraemer	Air Force Research Laboratory	Hanscom Air Force Base, MA
	Ms. Rosemary Millham	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. William Waller	Tufts University	Medford, MA
	Dr. Esther Zirbel	College of Staten Island	Staten Island, NY
Partner(s):	Astronomical Society of the Pacific		San Francisco, CA
	NASA Goddard Space Flight Center		Greenbelt, MD
	NASA Headquarters Office of Education		Washington, DC
	NASA Headquarters Science Mission Directorate		Washington, DC

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	01 Oct 04	Challenger Learning Center of Maine— Bangor, ME	20	0	0
17 Oct 04	17 Oct 04	St. Mary's Episcopal Church—Rockport, MA	0	20	0
19 Oct 04	19 Oct 04	Museum of Science—Boston, MA	0	100	0
02 Nov 04	02 Nov 04	Museum of Science—Boston, MA	16	0	0
22 Jan 05	22 Jan 05	Museum of Science—Boston, MA	9	0	0
20 May 05	10 Jun 05	Museum of Science—Boston, MA	24	0	0
11 Jul 05	15 Jul 05	Tufts University—Medford, MA	58	0	0
10 Aug 05	12 Aug 05	Halibut Point State Park—Rockport, MA	17	0	0
02 Sep 05	02 Sep 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	5	0	0

A96. New England Workshops on Effective Electronic Communications for Science Education

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: Workshops and other educational activities were conducted to foster effective electronic communication for science education (via Web site, e-mail, e-newsletters, etc.).

Lead: Ms. Karen Spence, Museum of Science, Boston, MA 02114-1099.

Scientist(s): Ms. Cathleen Clemens Museum of Science Boston, MA
Ms. Karen Spence Museum of Science Boston, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
25 May 05	25 May 05	Museum of Science—Boston, MA	25	0	0

A97. New Horizons: Teacher Support

Theme(s): Heliophysics, Planetary

Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]

Description: The E/PO office helped scientists, engineers, and other team members become involved in the New Horizons efforts and provided opportunities for teacher training by coordinating training events and providing the resources necessary for the team members' participation in discussions, activities, and demonstrations the office also conducted classroom activities related to the New Horizons mission. These efforts supported State, local, and national efforts directed towards systemic reform of science, mathematics, and technology education. Also, these training activities were based on the criteria contained in the national Mathematics, Science, and Technology Standards. Teacher training was also conducted by some of our E/PO partners, such as The Maryland Science Center, during SpaceLink's Teacher Thursday events. These were high-leverage teacher training opportunities that built on existing programs, institutions, and infrastructure.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.pluto.jhuapl.edu>

Secondary URL: <http://www.jhuapl.edu>

Scientist(s):	Ms. Kate Becker	University of Colorado—Boulder	Boulder, CO
	Ms. Kerri Beisser	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Alice Bowman	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Brooke Carter	Science Systems and Applications, Inc.	Lanham, MD
	Dr. Alexandra Cha	Glenelg Country School	Glenelg, MD
	Ms. Honora Dash	John Dewey High School	Brooklyn, NY
	Ms. Sandra Dawson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Glen Fountain	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Barry Fried	John Dewey High School	Brooklyn, NY
	Ms. Keri Garver	Montana State University	Bozeman, MT
	Ms. Cynthia Keeling	NASA Independent Verification & Validation Facility (IV&V)	Fairmont, WV
	Mr. Stan Kozuch	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. Flavio Mendez	Maryland Science Center	Baltimore, MD
	Mr. Hadi Navid	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. James Stratton	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Kelly Wardlaw	Oklahoma State University	Stillwater, OK
	Dr. Harold Weaver	Johns Hopkins University Applied Physics Laboratory	Laurel, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Oct 04	16 Oct 04	Tinker Air Force Base— Tinker Air Force Base, OK	6	0	0
18 Nov 04	18 Nov 04	Maryland Science Center—Baltimore, MD	37	0	0
13 Dec 04	13 Dec 04	Clarion School PS 205—Brooklyn, NY	20	0	0
05 Feb 05	05 Feb 05	Space Center Houston—Houston, TX	10	0	0
28 Mar 05	28 Mar 05	Clarion School PS 205—Brooklyn, NY	25	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	30	0	0
28 Jul 05	30 Jul 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	11	0	0
12 Aug 05	12 Aug 05	STARBASE Martinsburg—Martinsburg, WV	19	0	0

A98. Northwest Workshops in Space Science Education

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: The goals of the Northwest Workshops in Space Science Education program is to reach increasing numbers of preservice and inservice teachers in our region with high-quality space science professional development experiences. The workshops in this section are on a wide variety of space science topics, with considerable involvement of space scientists in the delivery. The workshops vary in their duration from several hours to 5 days.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu.
Phone: 206-616-1084.

Primary URL: <http://www.s2n2.org/e.html>

Secondary

URL: <http://www.waspacegrant.org/smuwork.html>

Scientist(s):	Mr. Scott Askew	NASA Johnson Space Center Astronomical Society	Houston, TX
	Mr. Jim Beck	For Inspiration and Recognition of Science and Technology (FIRST) Robotics	Campbell, CA
	Ms. Kim Binsted	Institute for Astronomy	Hilo, HI
	Dr. Andy Boal	Institute for Astronomy	Hilo, HI
	Mr. David Bowdley	University of Hawaii at Hilo	Hilo, HI
	Mr. Kobie Boykins	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Mark Brown	Institute for Astronomy	Hilo, HI
	Dr. Lysa Chizmadia	Institute for Astronomy	Hilo, HI
	Dr. Tom Chun	Institute for Astronomy	Hilo, HI
	Dr. Paul Coleman	University of Hawaii at Hilo	Hilo, HI
	Ms. Eda Davis-Butts	Oregon State University	Corvallis, OR
	Dr. Audrey Delsanti	Institute for Astronomy	Hilo, HI
	Ms. Emily Dodd	University of Hawaii at Hilo	Hilo, HI
	Dr. Onaka Erickson	Institute for Astronomy	Hilo, HI
	Dr. Yanga Fernandez	University of Hawaii at Hilo	Hilo, HI
	Mr. A. Fitzsimmons	Maui Community College	Kaahumanu-Kahului, HI
	Dr. Bill Geibink	Institute for Astronomy	Hilo, HI
	Dr. Vicky Hamilton	Arizona State University	Tempe, AZ
	Dr. Walt Harris	University of Wisconsin-Madison	Madison, WI
	Dr. Jack Higginbotham	Oregon State University	Corvallis, OR
	Ms. Sophia Hu	McKinley High School	Honolulu, HI
	Ms. Mary Kadooka	Institute for Astronomy	Honolulu, HI
	Dr. Ralf Kaiser	Institute for Astronomy	Hilo, HI
	Ms. Catherine Lanier	Oregon State University	Corvallis, OR
	Dr. Julie Lutz	University of Washington	Seattle, WA
	Dr. Karen Meech	University of Hawaii at Manoa	Honolulu, HI
	Ms. Kris Miller	Alaska State Fair	Palmer, AK
	Dr. Donna Minton	Montana NASA Space Grant	Bozeman, MT
	Dr. Mike Mottl	Institute for Astronomy	Hilo, HI
	Dr. Michael Nassir	Institute for Astronomy	Hilo, HI
	Ms. Cheryl Niemela	Rogers High School	Puyallup, WA
	Dr. Michael Odell	University of Idaho	Moscow, ID
	Dr. Toby Owen	Institute for Astronomy	Hilo, HI
	Dr. Jana Pittichova	Institute for Astronomy	Hilo, HI
	Ms. Sharon Price	Institute for Astronomy	Hilo, HI
	Mr. John Pye	Maui Community College	Kaahumanu-Kahului, HI
	Dr. Norbert Schorghofer	Hawaii Institute of Geophysics and Planetology	Honolulu, HI
	Dr. Evgenya Shkolnik	Institute for Astronomy	Hilo, HI
	Ms. Jane Storey	Mat-Su Borough School District	Palmer, AK
	Dr. Jeff Taylor	University of Hawaii at Manoa	Honolulu, HI
Partner(s):	Hawaii Public Schools		Honolulu, HI

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	01 Oct 04	Institute for Astronomy—Hilo, HI	29	0	0
27 Nov 04	27 Nov 04	Institute for Astronomy—Hilo, HI	39	0	0
11 Dec 04	11 Dec 04	Museum of Flight—Seattle, WA	13	0	0
10 Jan 05	10 Jan 05	Institute for Astronomy—Honolulu, HI	39	0	0
29 Jan 05	12 Feb 05	Institute for Astronomy—Hilo, HI	30	0	0
18 Feb 05	18 Feb 05	University of Idaho—Moscow, ID	22	0	0
26 Feb 05	26 Feb 05	Maui Community College— Kaahumanu-Kahului, HI	18	0	0
10 Mar 05	10 Mar 05	Oregon State University—Corvallis, OR	130	367	30
01 Apr 05	01 Apr 05	Institute for Astronomy—Hilo, HI	17	0	0
05 Apr 05	05 Apr 05	Oregon State University—Corvallis, OR	39	0	0

14 Apr 05	14 Apr 05	Grays Harbor College—Aberdeen, WA	28	0	0
29 Apr 05	29 Apr 05	Montana State University—Bozeman, MT	9	0	0
07 May 05	07 May 05	University of Washington—Seattle, WA	10	0	0
17 Jun 05	17 Jun 05	Alaska State Fair—Palmer, AK	0	216	0
02 Jul 05	02 Jul 05	Maui Community College— Kaahumanu-Kahului, HI	26	0	0
02 Jul 05	04 Jul 05	Maui Community College— Kaahumanu-Kahului, HI	27	0	0
06 Jul 05	08 Jul 05	University of Washington—Seattle, WA	14	0	0
11 Jul 05	13 Jul 05	North Central Educational Service District— Wenatchee, WA	12	0	0
17 Jul 05	22 Jul 05	Institute for Astronomy—Hilo, HI	17	0	0
01 Aug 05	06 Aug 05	Montana State University—Bozeman, MT	37	0	0
26 Sep 05	26 Sep 05	Mat-Su Borough School District—Palmer, AK	90	0	0

A99. One World, Many Worlds: Searching for Life on Earth and Other Planets

Theme(s): Astrophysics

Msn/Prgm: Keck Interferometer[B60]

Description: The goal of this program is to increase teachers' own understanding of key topics in the field of astrobiology and to provide a practical context in which science can be taught with an interdisciplinary approach. In astrobiology, interdisciplinary research is needed that combines molecular biology, ecology, planetary science, astronomy, information science, space exploration technologies, and related disciplines. A highly integrated science, astrobiology offers a rich venue for life science, physical science, and Earth and space science teachers to engage students with intriguing questions and ideas that introduce them to scientific inquiry and instill curiosity. As an integral part of the program, teachers work together to identify the science content learning standards in the Massachusetts Science and Technology/Engineering Curriculum Framework that they will be able to address with the proposed set of astrobiology activities.

Lead: Dr. Irene Porro, Massachusetts Institute of Technology, Cambridge, MA 02139. E-mail: iporro@space.mit.edu. Phone: 617-258-7481.

Primary URL: <http://cfa-www.harvard.edu/IOTA/EPO/>

Scientist(s):	Dr. Lee Hartmann	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Lisa Kaltenegger	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Andrew Knoll	Harvard University	Cambridge, MA
	Dr. Irene Porro	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Dimitar Sasselov	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Karen Spaulding	Cambridge Public School District	Cambridge, MA
	Dr. Guillermo Torres	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Wesley Traub	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Charlotte Zeamer	Massachusetts Institute of Technology	Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Oct 04	18 Oct 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
01 Nov 04	01 Nov 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
08 Nov 04	08 Nov 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
15 Nov 04	15 Nov 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	10	0
22 Nov 04	22 Nov 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	10	0
06 Dec 04	06 Dec 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
13 Dec 04	13 Dec 04	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	10	0
10 Jan 05	10 Jan 05	Harvard-Smithsonian Center for Astrophysics - Cambridge, MA	13	10	0
31 Jan 05	31 Jan 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	10	0
07 Feb 05	07 Feb 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
14 Feb 05	14 Feb 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	10	0
28 Feb 05	28 Feb 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
07 Mar 05	07 Mar 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0

A100. Origins Education Forum: Workshops/Presentations

Theme(s): Astrophysics

Msn/Prgm: ASO[B33]

Description: The Origins Education Forum provides workshops and presentations to share the excitement and story of the Astronomical Search for Origins with educators and the public. Workshops contain an overview of Origins science and hands-on activities, based on educational strands, to engage the audience. Presentations contain current Origins science and captivating imagery. Both provide the audience with an opportunity to interact directly with NASA scientists.

Lead: Dr. Denise Smith, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: dsmith@stsci.edu. Phone: 410-338-4434.

Primary URL: <http://origins.stsci.edu>

Secondary

URL: <http://teachspacescience.org>

Scientist(s):	Dr. Matt Bobrowsky	Space Telescope Science Institute	Baltimore, MD
	Dr. Liza Coe	NASA Ames Research Center	Moffett Field, CA
	Ms. Edna DeVore	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Alan Gould	Lawrence Hall of Science	Berkeley, CA
	Dr. Jennifer Grier	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Pamela Harman	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Dr. David Howe	Gonzaga State University	Spokane, WA
	Dr. Timothy Slater	University of Arizona	Tucson, AZ
	Dr. Denise Smith	Space Telescope Science Institute	Baltimore, MD
	Dr. Michelle Thaller	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Mary Urquhart	NASA Ames Research Center	Moffett Field, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	20	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	70	0	0
02 Apr 05	02 Apr 05	University of Texas at Dallas—Richardson, TX	25	0	0
07 Apr 05	07 Apr 05	Maryland Public Television—Owings Mills, MD	20	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	10	0	0

A101. "Our Star the Sun": Summer Institute

Theme(s): Heliophysics

Msn/Prgm: LWS/PO[B90]

Description: The Institute was conducted for its fifth year to increase awareness and understanding of the STP/LWS programs. Participants were K–12 teachers from across the country. The students served were from mainstream, underrepresented, and underserved groups. The leverage and sustainability of the program were measured through the increased involvement of educators, scientists, and engineers from GSFC and other organizations.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary

URL: <http://stp.gsfc.nasa.gov>

Scientist(s):	Mr. Roberto Aleman	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Sara Brown	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Gilberto Colon	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Evelina Felicite-Maurice	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Charles Mercer	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Donald Michels	Naval Research Laboratory (NRL)	Washington, DC
	Dr. Rafael Montalvo	University of Puerto Rico at Mayagüez	Mayagüez, Puerto Rico
	Dr. Art Poland	George Mason University	Fairfax, VA
	Ms. Laura Ratta	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Maria Schwarz	University of Puerto Rico at Mayagüez	Mayagüez, Puerto Rico
	Mr. Mitchell Watkins	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 Jul 05	16 Jul 05	University of Puerto Rico at Mayagüez—Mayagüez, Puerto Rico	103	0	0

A102. Outreach to Native Americans in the Western Region

Theme(s): Heliophysics, Planetary

Msn/Prgm: DePaul B/F[B37], SSI B/F[B42]
 Description: One of the primary goals of the Broker/Facilitator program at the Space Science Institute (SSI) is to provide strategically valuable support for Indigenous communities in our region. This strategic support includes providing professional development opportunities in space science for educators of Native American students; facilitating the development of, access to, and use of exemplary curricular materials appropriate for Indigenous communities; providing awareness training for NASA scientists and educators who will be working in Native American communities; and facilitating Native American access to the process and results of space science research. The SSI Broker's intention is to provide these services while using guiding principles that include respect for spiritual and cultural values; mindfulness of Indigenous knowledge and perspective; approval of elders and community members; and engagement of Native American educators or consultants in each step of the process. This year, the SSI Broker created the Four Corners Alliance for Science, a network of educators in our region composed primarily of educators working on reservations. We provided astronomy workshops on four occasions, targeting Native American students and educators in Arizona, New Mexico, and South Dakota, and spent considerable time building upon established relationships in Indigenous communities. The SSI Broker hopes to continue its progress in building mutually respectful relationships that ensure the sustainability and success of NASA E/PO programs in Indigenous communities.

Lead: Ms. Christy Edwards, Space Science Institute, Boulder, CO 80301. E-mail: edwardcl@colorado.edu. Phone: 720-974-5824.

Contact: Ms. Christy Edwards, Space Science Institute, Boulder, CO 80301. E-mail: edwardcl@colorado.edu. Phone: 720-974-5824.

Scientist(s): Mr. Jessie Antonellis University of Arizona Tucson, AZ
 Dr. Cherilynn Morrow Space Science Institute Boulder, CO

Partner(s): Association for Experiential Education (AEE): Natives, Africans, Asians, Latinos(as), and Allies Boulder, CO
 Children's Museum of Durango, The Durango, CO
 Colorado Mathematics, Engineering, Science Achievement (MESA) Denver, CO
 NASA Astrobiology Institute (NAI) Moffett Field, CA
 NASA Explorer Schools Washington, DC
 NASA Goddard Space Flight Center Greenbelt, MD
 NASA Headquarters Washington, DC
 NASA Johnson Space Center Houston, TX
 NASA Langley Research Center Hampton, VA
 Navajo Nation Museum Window Rock, AZ
 Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Santa Cruz, CA
 University of Arizona Tucson, AZ
 Window Rock Unified School District Window Rock, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Jun 05	04 Jun 05	Navajo Nation Museum—Window Rock, AZ	25	0	0
29 Sep 05	30 Sep 05	Society for the Advancement of Chicanos and Native Americans in Science National Conference 2005—Denver, CO	30	0	0

A103. Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development

Theme(s): Heliophysics, Astrophysics
 Msn/Prgm: SECEF[B36], CHIPS[B54], Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]
 Description: The RHESSI E/PO program provides professional development opportunities for science teachers. These opportunities range from workshops at teacher conferences to activities and tours of the Space Sciences Laboratory at the University of California, Berkeley. In these programs, we disseminate curriculum materials developed for RHESSI, as well as other space science curriculum materials.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu. Phone: 510-643-2178.

Primary URL: http://cse.ssl.berkeley.edu/hessi_epo/
 Secondary URL: http://cse.ssl.berkeley.edu/hessi_epo/html/cur.html

Scientist(s): Ms. Sally Feldman University of California, Berkeley Berkeley, CA
 Dr. Bryan Mendez University of California, Berkeley Berkeley, CA
 Ms. Ruth Paglierani University of California, Berkeley Berkeley, CA
 Ms. Darlene Park University of California, Berkeley Berkeley, CA
 Dr. Laura Peticolas University of California, Berkeley Berkeley, CA
 Mr. Igor Ruderman University of California, Berkeley Berkeley, CA
 Dr. Greg Schultz University of California, Berkeley Berkeley, CA
 Ms. Amy Shutkin University of California, Berkeley Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	15	0	0
25 Feb 05	25 Feb 05	University of California, Berkeley—Berkeley, CA	28	0	0
29 Apr 05	29 Apr 05	California State University, Fresno—Fresno, CA	35	0	0
29 Jun 05	29 Jun 05	University of California, Berkeley—Berkeley, CA	21	0	0
09 Jul 05	09 Jul 05	University of California, Berkeley—Berkeley, CA	8	0	0

A104. S2N2: Outreach at Professional Education Conferences

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: The goal of the S2N2 Outreach at Professional Education Conferences program is to inform educators about SMD materials and programs in accordance with our responsibility to be a regional point of contact for the SMD education program. The conferences that we attend vary but are usually on the "statewide" level, such as the Idaho and Wyoming Science Teachers Associations. We generally have an exhibit booth and, perhaps, put on one or more workshops. A special event in November 2004 was a regional convention of the NSTA in Seattle. S2N2 had an exhibit booth, and Director Julie Lutz was chair of the meeting.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.

Primary URL: <http://www.s2n2.org/e.html>

Secondary

URL: <http://www.nsta.org>

Scientist(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
Ms. Shari Asplund		NASA Jet Propulsion Laboratory			
Dr. Jim Bell		Cornell University			
Ms. Laura Dalles		University of Wyoming			
Ms. Mary Kadooka		Institute for Astronomy			
Ms. Catherine Lanier		Oregon State University			
Dr. Arlene Levine		NASA Langley Research Center			
Dr. Joel Levine		NASA Langley Research Center			
Ms. Leslie Lowes		NASA Jet Propulsion Laboratory			
Ms. Sally Luttrell-Montes		University of Washington			
Dr. Julie Lutz		University of Washington			
Dr. Nancy Maryboy		Diné College			
Mr. Jeff Meyers		Western Oregon University			
Ms. Carolyn Ng		NASA Goddard Space Flight Center			
Dr. Michael Odell		University of Idaho			
Ms. Darlette Powell		University of Washington			
Dr. Kristie Scheel		University of Wyoming			
Ms. Susan Shugerman		Oregon Health Science University			
Ms. Gretchen Walker		University of Maryland			

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
07 Oct 04	07 Oct 04	Idaho Science Teachers Association—Lewiston, ID	478	92	0
08 Oct 04	08 Oct 04	Washington Library Media Association—Bellevue, WA	8	0	0
13 Nov 04	13 Nov 04	26th Annual American Indian Society for Engineering and Science National Conference—Anchorage, AK	0	35	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	3000	0	0
07 Jan 05	08 Jan 05	Wyoming Math and Science Teachers Conference—Casper, WY	150	150	0
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting—San Diego, CA	0	40	0
16 Jan 05	16 Jan 05	University of Alabama at Huntsville—Huntsville, AL	32	0	0
28 Jan 05	28 Jan 05	University of Washington—Seattle, WA	25	0	0
11 Mar 05	11 Mar 05	Central Western Oregon Science Expo—Monmouth, OR	300	442	3
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	10000	10000	0
01 Apr 05	01 Apr 05	Northwest Science Expo Interactive Discovery Exhibits—Portland, OR	792	765	5
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	16	0	0

A105. "SEU: Modeling the Universe Workshop": An Exploration of Space and Time

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SEU[B35], DePaul B/F[B37], SERCH B/F[B41], CXO[B44], GLAST[B47], GP-B[B48], CHIPS[B54], Swift[B57], WMAP[B58], HEASARC[B65], HETE-2[B67], Suzaku[B68]
 Description: The "Modeling the Universe" workshop is a professional development program for teachers of grades 8–12 that provides activities and discussion surrounding two key themes in the national science standards: (1) origin and evolution of the universe and (2) the nature of models, evidence, and explanation in science. It was collaboratively developed by a team of E/PO leads, scientists, and educators from the Universe Education Forum and Universe Exploration missions. Participants in the workshops build their own models of the universe and then refine them after visiting inquiry stations about the age of, objects in, and size of the universe. A presentation about the current model for the structure and evolution of the universe follows, using images and data from NASA missions. The workshops conclude with discussions about how to extend these ideas in the classroom and beyond. "Modeling the Universe" has been adapted and presented for multiple audiences at many venues. These events have been sponsored, coordinated, and implemented by various missions and the SEU Forum.
 Contact: Ms. Erika Reinfeld, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: ereinfeld@cfa.harvard.edu. Phone: 617-495-5433.
 Primary URL: <http://www.universeforum.org>
 Scientist(s): Ms. Lindsay Bartolone Adler Planetarium and Astronomy Museum Chicago, IL
 Dr. Nahide Craig University of California, Berkeley Berkeley, CA
 Ms. Mary Dussault Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Dr. Roy Gould Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Dr. Jennifer Grier Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Ms. Kathleen Lestition Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Bryan Mendez University of California, Berkeley Berkeley, CA
 Dr. Philip Plait Sonoma State University Rohnert Park, CA
 Dr. Irene Porro Massachusetts Institute of Technology Cambridge, MA
 Ms. Shannon Range Stanford University Stanford, CA
 Ms. Erika Reinfeld Harvard-Smithsonian Center for Astrophysics Cambridge, MA
 Ms. Sarah Silva Sonoma State University Rohnert Park, CA
 Dr. Simon Steel Harvard-Smithsonian Center for Astrophysics Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting—San Diego, CA	26	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	27	0	0

A106. SOFIA, SETI, and Kepler: Conference Exhibit Booth

Theme(s): Astrophysics
 Msn/Prgm: SOFIA[B53]
 Description: The Stratospheric Observatory For Infrared Astronomy (SOFIA) Education and Outreach program coexhibits with complementary education programs of the SETI Institute and the Kepler Mission at regional and national science teachers' conferences, as well as at conferences of planetarium and science center organizations. The exhibit consists of (1) an infrared camera demonstration; (2) a transiting planet demonstration; (3) literature on the education and science programs of SOFIA, the SETI Institute, and the Kepler Mission; and (4) staff members who answer questions and interact with visitors.
 Lead: Dr. Edna DeVore, Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, CA 94043.
 Contact: Ms. Pamela Harman, Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, CA 94043.
 E-mail: pharman@seti.org. Phone: 650-960-4523.
 Primary URL: http://www.sofia.usra.edu/Edu/calendar/edu_calendar.html
 Scientist(s): Dr. Dana Backman NASA Ames Research Center Moffett Field, CA
 Ms. Edna DeVore Search for Extraterrestrial Intelligence (SETI) Institute Mountain View, CA
 Ms. Pamela Harman Search for Extraterrestrial Intelligence (SETI) Institute Mountain View, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	300	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	400	0	0

A107. Solar Dynamics Observatory (SDO): Educator Workshops

Theme(s): Heliophysics
 Msn/Prgm: SDO[B91]
 Description: As a critical part of the overall SDO Project Office education and public outreach effort, educational program development incorporates national standards and provides educators with the resources necessary to enhance

curricula for all grade levels. Such programs include partnerships with SDO scientists, scientists from colleges and universities, and E/PO personnel from museums and science centers. These individuals develop and demonstrate hands-on, inquiry-based activities and lessons with a cross-disciplinary approach to education. Through a workshop venue, educators are introduced to the tools and resources necessary for them to successfully include NASA-related science applications and encourage students to explore careers in science, mathematics, engineering, and technology.

Lead: Ms. Emilie Drobnes, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: Emilie@ihy.gsfc.nasa.gov. Phone: 301-286-3146.

Contact: Ms. Lynn Harden, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

Scientist(s): Ms. Emilie Drobnes NASA Goddard Space Flight Center Greenbelt, MD
Dr. W. Dean Pesnell NASA Goddard Space Flight Center Greenbelt, MD
Partner(s): NASA Headquarters Washington, DC

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Mar 05	01 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	35	0	0
21 Jun 05	21 Jun 05	NASA Goddard Space Flight Center—Greenbelt, MD	20	0	0
13 Jul 05	13 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	28	0	0
19 Jul 05	19 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	36	0	0

A108. South Central Organization of Researchers and Educators (SCORE): State Science Teachers Conferences

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SCORE[B38]

Description: In an effort to acquaint K–12 science teachers with the Science Mission Directorate Support Network and its activities, SCORE attends State science teacher conventions, hosts a booth, and facilitates workshops. A primary purpose is to acquaint attendees with SCORE and the Support Network and to share their role in helping to facilitate relationships between educators and researchers. The booth is designed to share general information about science questions being addressed by the Forums and to provide materials that help educators understand and teach the content (e.g., posters, background information, activities, and learning resources). The booth provides a rich opportunity to speak with State educators and learn about their needs (a survey is provided). Attendees are encouraged to join the SCORE mailing list to learn about future opportunities for involvement and about mission and science news, events, and educational resources. SCORE works to bring in local space science researchers and E/PO specialists to host workshops and helps to facilitate those workshops. Workshops focus on science content and provide context for shared Forum and NASA educational products.

Lead: Dr. Stephanie Shipp, Lunar and Planetary Institute, Houston, TX 77058–1113. E-mail: shipp@lpi.usra.edu.
Phone: 281-486-2109.

Primary URL: <http://www.lpi.usra.edu/education/score/>

Scientist(s): Mr. Erik Bailey NASA Jet Propulsion Laboratory Pasadena, CA
Ms. Shannon Range Stanford University Stanford, CA
Dr. Eileen Stansbery NASA Johnson Space Center Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
21 Oct 04	21 Oct 04	Oklahoma Science Teachers Association Conference—Tulsa, OK	23	100	0
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	0	500	0
11 Nov 04	12 Nov 04	New Mexico Science Teachers Association Annual Conference—Albuquerque, NM	75	200	0

A109. Space Science Workshops for Educators

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SSE[B34], SEU[B35], NESSIE B/F[B40], SSI B/F[B42], HST[B49], Kepler[B50], SST[B52], SOFIA[B53], NAI[B62], SOHO[B84], SDO[B91], Cassini-Huygens Probe[B94], JPL SSE[B96], Mars Public Engagement[B97], MER[B99]

Description: The Space Science Institute (SSI) delivers workshops (1 hour to 1 week in duration) for classroom, outdoor, and museum educators who wish to use Sun-Earth Connection themes (eclipses, space weather), planetary science (e.g., Mars and Saturn), astrobiology, and basic astronomy (kinesthetic astronomy) as engaging contexts for learning age-appropriate, standards-based concepts in science and mathematics. SSI is also developing the capacity for workshops in Earth system science. SSI workshops generally include background science content, inquiry-based pedagogy, and hands-on practice with exemplary lesson plans. Workshops often combine science education with an artistic dimension, such as music, movement, poetry, or visual art, and in this way endeavor to address diverse ways of knowing and learning. SSI educator workshops have been offered at a variety of venues for both formal and informal educators, including professional society meetings, science education conferences, conferences for outdoor educators, community events, and host sites of SSI's traveling science exhibits (Alien Earths, Destination Mars, and MarsQuest). SSI also provides space science education training for the Mile-Hi Council of Girl Scouts troop Leaders, the Colorado MESA (Math, Engineering,

and Science Achievement) after-school program leaders, and the Astronomical Society of the Pacific's Project ASTRO site leaders. The SSI Broker/Facilitator program uses educator workshops to (1) make new contacts in the region, (2) raise awareness of NASA education and public outreach products and events, and (3) assess educational needs in the region. SSI is also currently working through its Broker/Facilitator program to help identify and create standards-based professional development opportunities for Native American and Chicano educators.

Lead: Dr. Cheryl Lynn Morrow, Space Science Institute, Boulder, CO 80301. E-mail: camorrow@colorado.edu.
Phone: 720-974-5828.

Primary URL: <http://www.spacescience.org>

Scientist(s): Dr. Heidi Hammel Space Science Institute
Mr. James Harold Space Science Institute

Partner(s): Adler Planetarium and Astronomy Museum
Air Force Research Laboratory

Albuquerque Public Schools
American Association for the Advancement of Science
American Astronomical Society
American Geophysical Union
Analytical Graphics, Inc.
Arizona State University
Astronomical Society of the Pacific
Austin College
Avampato Discovery Museum
Ball Aerospace Technologies Corporation
Ball State University
Bishop Museum
Boeing Company
Boston University
California Institute of Technology (Caltech)
Carnegie Institution of Washington
Carnegie Museum of Natural History
Carnegie Observatories
Chabot Space and Science Center
Challenger Learning Center of Maine
Chandra X-ray Center
Children's Museum of Durango
Christa McAuliffe Planetarium
City University of New York (CUNY) Medgar Evers College
Clark Atlanta University
Clemson University
Colorado Mathematics, Engineering, Science Achievement (MESA)
Cornell University
CUNY City College of New York
Deep Space Network
Denver Museum of Nature and Science
DePaul University
European Southern Observatory
European Space Agency (ESA)
European Space Agency Research and Technology Centre
Exploratorium
Fermi National Accelerator Laboratory
Fernbank Science Center
Gemini Observatory
George Washington University
Girl Scouts of North Alabama
Girl Scouts of Northwest Georgia
Goldstone Deep Space Communications Complex
Grand Valley State University
Harvard University
Harvard-Smithsonian Center for Astrophysics
Holy Spirit Regional School
Houston Museum of Natural Science
Howard University
ILC Dover, Inc., Frederica, DE
Illinois State University
Indigenous Education Institute
Institute for Astronomy
International Arctic Research Center
Jackson State University

Boulder, CO
Boulder, CO
Chicago, IL
Hanscom Air Force
Base, MA
Albuquerque, NM
Washington, DC
Washington, DC
Washington, DC
Malvern, PA
Tempe, AZ
San Francisco, CA
Sherman, TX
Charleston, WV
Boulder, CO
Muncie, IN
Honolulu, HI
The, Everett, WA
Boston, MA
Pasadena, CA
Washington, DC
Pittsburgh, PA
Pasadena, CA
Oakland, CA
Bangor, ME
Cambridge, MA
The, Durango, CO
Concord, NH
Brooklyn, NY
Atlanta, GA
Clemson, SC
Denver, CO
Ithaca, NY
New York, NY
Madrid, Spain
Denver, CO
Chicago, IL
Santiago, Chile
Paris, France
Noordwijk, Netherlands
San Francisco, CA
Batavia, IL
Atlanta, GA
Hilo, HI
Washington, DC
Huntsville, AL
Atlanta, GA
Fort Irwin, CA
Allendale, MI
Cambridge, MA
Cambridge, MA
Huntsville, AL
Houston, TX
Washington, DC
Normal, IL
Bluff, UT
Honolulu, HI
Fairbanks, AK
Jackson, MS

Johns Hopkins University
 Johns Hopkins University Applied Physics Laboratory
 Kansas State University
 KETC-TV, Channel 9/St. Louis
 Lafayette Natural History Museum and Planetarium
 Lawrence Hall of Science
 Lehigh University
 Lockheed Martin Advanced Technology Center
 Lockheed Martin Space Systems
 LodeStar Astronomy Center
 Loma Linda University
 Lowell Observatory
 Lunar and Planetary Institute
 Macomb County Community College
 Malin Space Science Systems
 Marine Biological Laboratory
 Maryland Science Center
 Massachusetts Institute of Technology
 Montana State University
 Morgan State University
 Mount Wilson Observatory
 Museum of Science, Boston, MA Museum of the Rockies
 NASA Ames Research Center
 NASA Astrobiology Institute (NAI)
 NASA Glenn Research Center
 NASA Goddard Institute for Space Studies
 NASA Goddard Space Flight Center
 NASA Headquarters
 NASA Headquarters Office of Education
 NASA Headquarters Office of Public Affairs
 NASA Headquarters Science Mission Directorate
 NASA Headquarters Space Operations Mission Directorate
 NASA Jet Propulsion Laboratory
 NASA Johnson Space Center
 NASA Kennedy Space Center

NASA Langley Research Center
 NASA Marshall Space Flight Center

National Academy of Sciences
 National Center for Atmospheric Research
 National Oceanic and Atmospheric Administration (NOAA)
 National Radio Astronomy Observatory
 National Science Foundation
 National Severe Storms Laboratory
 National Solar Observatory
 New Detroit Science Center
 New Mexico State University, Las Cruces
 Northern Arizona University
 Northside Independent School District
 Orlando Science Center
 Passport to Knowledge (P2K)
 Pennsylvania Space Grant Consortium
 Planetary Society
 Polytechnic University of Puerto Rico
 Rice University
 Ridgefield Discovery Center
 Rio Rancho Public Schools
 Science Central
 Scientists in Education Working Group
 Search for Extraterrestrial Intelligence (SETI) Institute
 Smithsonian National Air and Space Museum (NASM)
 South Dakota School of Mines and Technology
 Southern Illinois University
 Southwest Research Institute
 Southwest Research Institute
 Space Telescope Science Institute
 St. Louis Science Center

Baltimore, MD
 Laurel, MD
 Salina, KS
 St. Louis, MO
 Lafayette, LA
 Berkeley, CA
 Bethlehem, PA
 Palo Alto, CA
 Littleton, CO
 Albuquerque, NM
 Loma Linda, CA
 Flagstaff, AZ
 Houston, TX
 Warren, MI
 La Jolla, CA
 Woods Hole, MA
 Baltimore, MD
 Cambridge, MA
 Bozeman, MT
 Baltimore, MD
 Mount Wilson, CA
 Bozeman, MT
 Moffett Field, CA
 Moffett Field, CA
 Cleveland, OH
 New York, NY
 Greenbelt, MD
 Washington, DC
 Washington, DC
 Washington, DC
 Washington, DC
 Washington, DC
 Pasadena, CA
 Houston, TX
 Kennedy Space Center, FL
 Hampton, VA
 Marshall Space Flight Center, AL
 Washington, DC
 Boulder, CO
 Boulder, CO
 Socorro, NM
 Arlington, VA
 Norman, OK
 Sunspot, NM
 Detroit, MI
 Las Cruces, NM
 Flagstaff, AZ
 San Antonio, TX
 Orlando, FL
 Morristown, NJ
 University Park, PA
 Pasadena, CA
 San Juan, Puerto Rico
 Houston, TX
 Ridgefield, CT
 Rio Rancho, NM
 Fort Wayne, IN
 Boulder, CO
 Mountain View, CA
 Washington, DC
 Rapid City, SD
 Carbondale, IL
 San Antonio, TX
 Boulder, CO
 Baltimore, MD
 St. Louis, MO

Stanford University
 State University of New York (SUNY), Stony Brook
 Stratospheric Observatory For Infrared Astronomy (SOFIA)
 U.S. Air Force
 U.S. Department of Agriculture (USDA) Foreign Agricultural Service
 U.S. Geological Survey
 U.S. Naval Observatory
 Universities Space Research Association
 University Corporation for Atmospheric Research
 University of Alaska, Fairbanks
 University of Arizona
 University of California, Berkeley
 University of California, Los Angeles
 University of Chicago
 University of Colorado, Boulder
 University of Hawaii at Hilo
 University of Houston
 University of Houston-Downtown
 University of Illinois at Urbana-Champaign
 University of Maryland
 University of Miami
 University of Missouri-Kansas City
 University of Missouri-St. Louis
 University of New Hampshire
 University of New Mexico
 University of Northern Colorado
 University of Southern Maine
 University of Tennessee
 University of Texas at Austin
 University of Texas at Brownsville
 University of Texas at El Paso
 University of Utah
 University of Washington
 University of Wyoming
 W.M. Keck Observatory
 Washington University
 Wernher von Braun Planetarium
 Whyville Numedean, Inc.
 Window Rock Unified School District
 Woods Hole Oceanographic Institute
 Yerkes Observatory, University of Chicago

Stanford, CA
 Stony Brook, NY
 Moffett Field, CA
 Washington, DC
 Washington, DC
 Flagstaff, AZ
 Washington, DC
 Moffett Field, CA
 Boulder, CO
 Fairbanks, AK
 Tucson, AZ
 Berkeley, CA
 Los Angeles, CA
 Chicago, IL
 Boulder, CO
 Hilo, HI
 Houston, TX
 Houston, TX
 Urbana, IL
 College Park, MD
 Miami, FL
 Kansas City, MO
 St. Louis, MO
 Durham, NH
 Albuquerque, NM
 Greeley, CO
 South Portland, ME
 Knoxville, TN
 Austin, TX
 Brownsville, TX
 El Paso, TX
 Salt Lake City, UT
 Seattle, WA
 Laramie, WY
 Kamuela, HI
 St. Louis, MO
 Huntsville, AL
 Pasadena, CA
 Window Rock, AZ
 Woods Hole, MA
 Williams Bay, WI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Oct 04	05 Oct 04	Science Museum of Virginia—Richmond, VA	30	0	0
19 Nov 04	19 Nov 04	Colorado Science Convention Committee— Franktown, CO	21	0	0
09 Jan 05	13 Jan 05	85th American Meteorological Society Annual Meeting—San Diego, CA	40	0	0
05 Feb 05	07 Feb 05	Lawrence Hall of Science—Berkeley, CA	15	0	0
01 Jun 05	02 Jun 05	Challenger Learning Center— Colorado Springs, CO	20	0	0
06 Aug 05	10 Aug 05	American Association of Physics Teachers— Salt Lake City, UT	0	50	0
18 Aug 05	18 Aug 05	Ridgefield Public Library—Ridgefield, CT	95	50	0

A110. Space Vision

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: IDEAS[B26]

Description: The primary objective of the project was to help visually impaired students increase their knowledge of astronomy and the solar system and to improve teaching methods and strategies in this field for teachers of visually impaired students. The program reached 40 visually impaired students, 20 teachers at the Texas State School for the Blind (TSBVI), and about 3,000 students who attend Science Fun Day through the experiential exhibits and knowledge transfer. The program was a partnership between the TSBVI, the Texas Cooperative Extension Service 4-H and Youth Program, and SAP America (Systems Applications Products in Data Processing, a global software company). In particular, the program team worked closely with the TSBVI science teacher and curriculum coordinator for the school's special programs. In preparation for the student workshop, 4-H teens from Austin area high schools were involved in helping make tactile demonstration aids. Volunteers from SAP trained to conduct activities during the Science Fun Day.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: hbradbur@stsci.edu.
 Phone: 410-338-4968.
 Scientist(s): Dr. Judit Ries University of Texas at Austin Austin, TX
 Partner(s): Texas Cooperative Extension College Station, TX
 Texas State School for the Blind Austin, TX
 University of Texas at Austin Austin, TX

A111. Spitzer Space Telescope Educator Workshops

Theme(s): Astrophysics

Msn/Prgm: SST[B52]

Description: The Spitzer Science Center (SSC) and the National Optical Astronomy Observatory (NOAO) have designed a program for teacher and student research using observing time on the Spitzer Space Telescope. This program allows a team of teachers and their students to utilize the SSC Director's discretionary observing time on the Spitzer Space Telescope for educational observations. The granted observing time and targets were subject to approval by the Spitzer Science Center Director and follow all the Spitzer Space Telescope observing rules and guidelines. Once the data are acquired, the teachers visit the Spitzer Science Center to begin the data analysis with the scientists. We advertised Round 1 of the Spitzer teacher's program to teachers on a national level in September 2004, and at the end of October, we selected the teachers for the program. Of the 37 applications received, we chose 12 teachers. Their backgrounds vary from physics, astronomy, and engineering to biochemistry and neurobiology. We divided the 12 teachers into subgroups to work on Spitzer observing projects. Each subgroup was paired with a scientist from the SSC community; the subgroups received help and collaborated with NOAO scientists. The scientist is the mentor and technical contact for the individual subgroup and respective observing project. Six teacher proposals were accepted and submitted for observations. The participating teachers attended a fall 2004 workshop in order to become familiar with the Spitzer Space Telescope archives and to receive training in infrared astronomy and observational techniques.

Lead: Ms. Doris Daou, California Institute of Technology (Caltech), Pasadena, CA 91125.

E-mail: daou@ipac.caltech.edu. Phone: 626-395-8668.

Contact: Ms. Doris Daou, California Institute of Technology (Caltech), Pasadena, CA 91125.

E-mail: daou@ipac.caltech.edu. Phone: 626-395-8668.

Scientist(s): Ms. Doris Daou California Institute of Technology (Caltech) Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
18 Nov 04	18 Nov 04	National Optical Astronomy Observatory—Tucson, AZ	12	0	0

A112. Spitzer Space Telescope: Workshops and Activities for K–12 Teachers

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: The program's goal is to enrich K–12 teachers' content knowledge about interstellar dust, infrared light, and the Spitzer Space Telescope (SST). The program encourages K–12 teachers to enrich their science instruction with a colorful poster, engaging activities, and online components about interstellar dust and related astronomical research. The PI and the McDonald Observatory Education Outreach Office developed a poster about the Spitzer Space Telescope and dust. The poster was published in the National Science Teachers Association journal, "Science and Children." The poster features three inquiry-based, hands-on activities ranging from grades K–8 (developed by E/PO Co-I) that align with national science education standards. Receiving background information on the SST and participating in some of the poster's hands-on activities at these science teacher conferences will make teachers more likely to incorporate the poster activities into their science instruction or curriculum. The grade 9–12 activity leads students through a hands-on investigation of dust in their classroom. Students use a PowerPoint presentation to understand the research in terms of their classroom investigation.

Lead: Dr. Neal Evans, University of Texas at Austin, Austin, TX 78712. E-mail: nje@astro.as.utexas.edu.
 Phone: 512-471-4396.

Primary URL: <http://mcdonaldobservatory.org/teachers/classroom/>

Secondary

URL: <http://peggysue.as.utexas.edu/SIRTF/>

Scientist(s): Dr. Don Winget University of Texas at Austin Austin, TX

A113. "Staying Cool" Training Workshop

Theme(s): Planetary

Msn/Prgm: MESSENGER[B109]

Description: Educator training workshops were given on the education module Staying Cool, developed in support of the MESSENGER mission to Mercury. Staying Cool explores the basic concepts of light, heat, and energy to investigate how spacecraft such as MESSENGER can study planets using light and radiation without being damaged by the harsh, high-temperature, high-radiation environment in which they have to operate. Staying Cool was developed in concert with the American Association for the Advancement of Science's Project 2061, and the lessons are aligned with the National Science Education Standards and Benchmarks for Science Literacy. In the Martinsville Public School System, Staying Cool-themed presentations on solar system exploration were also given to students to bridge to the training the educators received.

Lead: Ms. Stephanie Stockman, Science Systems and Applications, Inc., Lanham, MD 20706. Phone: 301-614-6457.

Primary URL: http://btc.montana.edu/messenger/teachers/MEMS_scipro.htm#cool

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Nov 04	19 Nov 04	Martinsville Public School System— Martinsville, VA	0	4184	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	0	42	0

A114. STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36], CHIPS[B54], Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], STEREO[B88]

Description: STEREO is the third of five Solar Terrestrial Probes. This mission will obtain simultaneous images of the Sun from two spacecraft and build a 3-D picture of coronal mass ejections (CMEs) and the complex structures around them. STEREO will also study the propagation of disturbances through the heliosphere and their effects at Earth orbit. The STEREO E/PO program participates in the Sun-Earth Connection Education Forum-sponsored workshops that meet the needs of educators at all grade levels. We present these workshops to inservice educators to teach them about the most recent and relevant solar and STEREO science discoveries, which they will then teach in their classrooms. Mission scientists participate in the workshops to share the science content. Education specialists provide integrated, hands-on activities to demonstrate science applications in the classroom. The missions also provide images and animations to support programs that have been developed by the science centers specifically for educators and for the general public.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Primary URL: <http://cse.ssl.berkeley.edu/impact/vos/vos.html>

Secondary

URL: <http://cse.ssl.berkeley.edu/impact/magnetism/MagGuide.htm>

Scientist(s):	Dr. Nahide Craig	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA

Partner(s):	Montana NASA Space Grant	Bozeman, MT
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Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Nov 04	05 Nov 04	Chabot Space and Science Center— Oakland, CA	0	158	0
19 Nov 04	19 Nov 04	NASA Johnson Space Center—Houston, TX	0	40	0

A115. STEREO: Teacher Professional Development

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36], Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]

Description: STEREO is the third of five Solar Terrestrial Probes. This mission will obtain simultaneous images of the Sun from two spacecraft and build a 3-D picture of coronal mass ejections (CMEs) and the complex structures around them. STEREO will also study the propagation of disturbances through the heliosphere and their effects at Earth orbit. The STEREO E/PO program participates in the Sun-Earth Connection Education Forum-sponsored workshops that meet the needs of educators at all grade levels. We present these workshops to inservice educators to teach them about the most recent and relevant solar and STEREO science discoveries, which they will then teach in their classrooms. Mission scientists participate in the workshops to share the science content. Education specialists provide integrated, hands-on activities to demonstrate science applications in the classroom. The missions also provide images and animations to support programs that have been developed by the science centers specifically for educators and for the general public.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Primary URL: <http://cse.ssl.berkeley.edu/impact/K-12.html>

Secondary

URL: <http://cse.ssl.berkeley.edu/impact/magnetism/MagGuide.htm>

Scientist(s):	Dr. Nahide Craig	University of California, Berkeley	Berkeley, CA
	Ms. Sally Feldman	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Ms. Darlene Park	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA
	Mr. Igor Ruderman	University of California, Berkeley	Berkeley, CA
	Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	300	0	0

08 Jan 05	12 Jan 05	American Association of Physics Teachers— Albuquerque, NM	12	0	0
23 Jul 05	23 Jul 05	University of California, Berkeley—Berkeley, CA	30	0	0

A116. Sun-Earth Connection Education Forum (SECEF): Educator Conference Support

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36], RHESSI[B76]

Description: The conference featured speakers, workshops, short courses, field courses, and special events addressing the diverse needs of science educators from all grade levels and all science disciplines.

Lead: Dr. Greg Schultz, University of California, Berkeley, Berkeley, CA 94720. E-mail: schultz@ssl.berkeley.edu.
Phone: 510-643-0012.Primary URL: <http://www.casience.org/generalinfo04.html>

Secondary

URL: <http://www.casience.org/index.html>Scientist(s): Dr. Bryan Mendez University of California, Berkeley Berkeley, CA
Dr. Greg Schultz University of California, Berkeley Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	25	0	0

A117. Sun-Earth Connection Education Forum (SECEF): Preservice Teacher Education

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36]

Description: SECEF, a partnership between the University of California, Berkeley, and NASA Goddard Space Flight Center, has developed teacher education efforts to meet the needs of preservice educators for all grade levels. Scientists and education specialists present inquiry-oriented, age-appropriate activities and the most recent and relevant Sun-Earth Connection science to a broad audience of future teachers-including undergraduate students and teaching credential candidates. These preservice teachers become active learners and improve both their content knowledge and pedagogy in Sun-Earth Connection science. Preservice teacher education provides a unique opportunity to affect a significant number of teachers at the outset of their careers, when there is great potential for lasting results.

Lead: Dr. Greg Schultz, University of California, Berkeley, Berkeley, CA 94720. E-mail: schultz@ssl.berkeley.edu.
Phone: 510-643-0012.Primary URL: <http://sunearth.ssl.berkeley.edu>

Secondary

URL: <http://sunearth.gsfc.nasa.gov>

Scientist(s): Dr. Greg Schultz University of California, Berkeley Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	55	0
19 Jan 05	23 Jan 05	Association for Science Teacher Education (ASTE) Annual Conference— Colorado Springs, CO	5	0	0
29 Jul 05	29 Jul 05	Lawrence Berkeley National Laboratory— Berkeley, CA	30	0	0

A118. Sun-Earth Connection Education Forum (SECEF): Professional Development-Sharing Sun-Earth Connections with Inservice Teachers

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36]

Description: The Sun-Earth Connection scientists and education specialists share the science of the Sun with educators through professional development opportunities. These include indepth content enhancement, applications of the scientific knowledge for classroom instruction, integration into classroom instruction through standards connections, and the use of exemplary products that have gone through an objective science and instructional review.

Lead: Ms. Elaine Lewis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: lewis@mail630.gsfc.nasa.gov. Phone: 301-286-3337.Contact: Dr. Greg Schultz, University of California, Berkeley, Berkeley, CA 94720. E-mail: schultz@ssl.berkeley.edu.
Phone: 510-643-0012.Primary URL: <http://sunearth.gsfc.nasa.gov>

Secondary

URL: <http://sunearth.ssl.berkeley.edu>Scientist(s): Dr. David Alexander Lockheed Martin Solar and Astrophysics
Laboratory Palo Alto, CA
Dr. Nahide Craig University of California, Berkeley Berkeley, CA
Dr. Isabel Hawkins University of California, Berkeley Berkeley, CA

Dr. Ramon Lopez	University of Texas at El Paso	El Paso, TX
Ms. Carolyn Ng	NASA Goddard Space Flight Center	Greenbelt, MD
Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
20 Oct 04	24 Oct 04	Society for the Advancement of Chicanos and Native Americans in Science National Conference 2004—Austin, TX	65	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	62	0	0
05 Mar 05	05 Mar 05	Council of Math Science Educators of San Mateo County Conference—Redwood City, CA	20	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	55	0	0
25 Jun 05	25 Jun 05	Sun-Earth Connection K-4 Teacher Workshop—Emeryville, CA	15	0	0
01 Aug 05	01 Aug 05	Sun-Earth Connection K-4 Workshop—Oakland, CA	25	0	0
17 Sep 05	17 Sep 05	Sun-Earth Connection K-4 Teacher Workshop—Tuscon, AZ	20	0	0

A119. Teacher Training Through Research and Public Understanding of Cosmology

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: The first goal of this project is to provide opportunities for public school teachers to obtain research experience and to use this experience to assist other teachers and their classes. In addition, Brown graduate and undergraduate students visit two local high schools on a weekly basis to run science clubs and after-school science enrichment activities. The second goal of this project is to bring advances in cosmology to the public. This is being done by adding to two existing programs: (1) At Brown, the educational effectiveness of weekly open nights has been enhanced with guest lectures aimed at the public. (2) At the University of Wisconsin, the "Universe in the Park" program has been expanded.

Contact: Dr. Gregory Tucker, Brown University, Providence, RI 02912. E-mail: tucker@physics.brown.edu. Phone: 401-863-1441.

Primary URL: <http://astro.physics.brown.edu/outreach/>

Secondary

URL: <http://www.astro.wisc.edu/%7Ejr/index.html>

Scientist(s): Dr. Peter Timbie University of Wisconsin-Madison
Dr. Gregory Tucker Brown University

Madison, WI
Providence, RI
Providence, RI
Madison, WI

Partner(s): Providence Public Schools
University of Wisconsin-Madison

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
20 Feb 05	21 Feb 05	University of Wisconsin-Madison—Madison, WI	9	200	0
10 Apr 05	10 Apr 05	University of Wisconsin-Madison—Madison, WI	18	0	0
01 Jun 05	30 Sep 05	University of Wisconsin-Madison—Madison, WI	4	0	0
05 Jul 05	23 Aug 05	Brown University—Providence, RI	7	0	0
14 Jul 05	14 Jul 05	Devil's Lake State Park—Baraboo, WI	6	100	0
17 Jul 05	17 Jul 05	New Glarus Wood State Park—New Glarus, WI	7	50	0
06 Aug 05	06 Aug 05	Kettle Moraine State Park—Eagle, WI	7	50	0
13 Aug 05	13 Aug 05	University of Wisconsin-Madison—Madison, WI	4	100	0

A120. Testing Ideas About Light

Theme(s): Heliophysics, Planetary

Msn/Prgm: MARSSB[B39], MESSENGER[B109]

Description: "Shining the Full Spectrum of Light on Pre-Service Teachers" was a series of 3-hour training sessions for preservice elementary education students and faculty that used Mercury Surface, Space Environment, Geochemistry, and Ranging (MESSENGER) and other SMD exemplary E/PO materials. This program required educator and scientist involvement in the workshop presentation. The session included a lecture and hands-on activities focusing on physical science. Outcomes and followup: As an alternative to doing short workshops at State science conferences (which were poorly attended and extremely short), we offer a workshop that is integrated into the science methods curriculum and that can be broadcast via distance learning to multiple colleges and universities after the West Virginia pilot is reviewed and ready for dissemination.

Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.
E-mail: lruberg@cet.edu. Phone: 304-243-2480.

Primary URL: <http://marssb.cet.edu>

Secondary

URL: <http://messenger.jhuapl.edu>

Scientist(s): Dr. Joseph Busche
Dr. Laurie Ruberg

Wheeling Jesuit University
Wheeling Jesuit University

Wheeling, WV
Wheeling, WV

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
24 Feb 05	26 Feb 05	National Afterschool Association— San Antonio, TX	20	70	0
14 Sep 05	14 Sep 05	Center for Educational Technologies— Wheeling, WV	11	0	0
15 Sep 05	15 Sep 05	Center for Educational Technologies— Wheeling, WV	11	0	0
28 Sep 05	28 Sep 05	Center for Educational Technologies— Wheeling, WV	11	0	0
30 Sep 05	30 Sep 05	Center for Educational Technologies— Wheeling, WV	11	0	0

A121. THEMIS: Education and Public Outreach

Theme(s): Heliophysics

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]

Description: The Time History of Events and Macroscale Interactions during Substorms (THEMIS) is to be launched in 2007. THEMIS is a five-satellite mission with the job of determining the causes of the global reconfigurations of Earth's magnetosphere that are evidenced in auroral activity. The THEMIS satellites are carrying identical suites of electric, magnetic, and particle detectors that will be put in carefully coordinated orbits. Every 4 days, the satellites will line up along Earth's magnetic tail; this position will allow them to track disturbances. The satellite data will be combined with observations of the aurora from a network of observatories across the Arctic Circle. As part of the E/PO program for the THEMIS mission, new ground magnetometer stations will be established at secondary schools and tribal and community colleges in eight States. The Space Grant Consortia of the eight States (Alaska, Oregon, Montana, North Dakota, South Dakota, Wisconsin, Michigan, and Pennsylvania) will work with the mission and the State schools to identify the location for the magnetometer stations and will coordinate local educational and outreach effects of the new facility, its data, and the THEMIS mission, extending the impact of the magnetometer station beyond the single school at which it is located.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Contact: Dr. Laura Peticolas, University of California, Berkeley, Berkeley, CA 94720. E-mail: laura@ssl.berkeley.edu.
Phone: 510-643-7273.

Primary URL: <http://ds9.ssl.berkeley.edu/themis/flash.html>

Secondary

URL: http://ds9.ssl.berkeley.edu/themis/aboutus_personnel.html

Scientist(s): Dr. Vassilis Angelopoulos University of California, Berkeley Berkeley, CA
Dr. Nahide Craig University of California, Berkeley Berkeley, CA
Mr. Wendell Gehman Red Cloud High School Pine Ridge, SD
Dr. Jane Hoberman University of California, Berkeley Berkeley, CA
Dr. Laura Peticolas University of California, Berkeley Berkeley, CA
Partner(s): Montana NASA Space Grant Bozeman, MT

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	11 Oct 04	"Rapid City Journal"—Rapid City, SD	0	29000	0
15 Feb 05	15 Feb 05	Valentine Elementary School—San Marino, CA	152	0	0
26 Feb 05	26 Feb 05	AT&T California—San Ramon, CA	0	450	0

A122. THEMIS: Teacher Professional Development

Theme(s): Heliophysics

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]

Description: THEMIS science is shared with teachers at conferences.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Contact: Dr. Laura Peticolas, University of California, Berkeley, Berkeley, CA 94720. E-mail: laura@ssl.berkeley.edu.
Phone: 510-643-7273.

Scientist(s): Dr. Nahide Craig University of California, Berkeley Berkeley, CA
Mr. Cris DeWolf Chippewa Hills High School Remus, MI
Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD
Dr. Karen Ostlund University of Texas at Austin Austin, TX
Dr. Laura Peticolas University of California, Berkeley Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Oct 04	02 Oct 04	Michigan Earth Science Teachers Association Fall Conference—Hartland, MI	20	0	0

13 Nov 04	13 Nov 04	26th Annual American Indian Society for Engineering and Science National Conference—Anchorage, AK	12	0	0
19 Jun 05	20 Jun 05	Western Nevada Community College—Carson City, NV	12	0	0
21 Jun 05	23 Jun 05	Gleason School—Carson City, NV	44	0	0

A123. TIMED: Teacher Support

Theme(s): Heliophysics, Planetary
Msn/Prgm: STEREO[B88], TIMED[B89], New Horizons (Pluto-Kuiper Belt) Mission[B105], MESSENGER[B109], NEAR[B110]
Description: The E/PO office helped scientists, engineers, and other team members become involved in the TIMED E/PO efforts and provided opportunities for teacher training by coordinating events and providing the resources necessary for the team members to participate in these prearranged teacher training events (team members led discussions and activities, provided demonstrations, and conducted classroom activities related to the TIMED mission). These efforts supported State, local, and national efforts directed toward systemic reform of science, mathematics, and technology education. Also, these training activities were based on the criteria contained in the national Mathematics, Science, and Technology Standards. Teacher training was also conducted by some of our E/PO partners such as the Maryland Science Center during SpaceLink's "Teacher Thursday" events. These were high-leverage teacher training opportunities that built on existing programs, institutions, and infrastructure.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.timed.jhuapl.edu/>

Secondary URL: <http://www.jhuapl.edu/>

Scientist(s): Ms. Dianne Robinson Hampton University Hampton, VA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	58	0	0

A124. "Touch the Sun": Teacher Workshop

Theme(s): Heliophysics
Msn/Prgm: Solar-B[B87]
Description: Touch the Sun is a 3-day workshop for teachers of grades 8–12 (and adaptable for grades 5–7). The core curriculum is a set of activities in which students investigate the Sun using scientific instruments they build in the classroom out of inexpensive, everyday materials. Precision in construction and measurement is emphasized, as well as redesigning to improve the quality of data. The activities include measuring the Sun's diameter, rate of rotation, and motion in the sky; decoding spectral information; designing and analyzing color filters; and more.

Lead: Mr. Benjamin Burress, Chabot Space and Science Center, Oakland, CA 94619.
E-mail: bburress@chabotspace.org. Phone: 510-336-7308.

Primary URL: <http://www.chabotspace.org/vsc/solar/news/june2005workshop.asp>

Scientist(s): Dr. Gibor Basri University of California, Berkeley Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
29 Jun 05	01 Jul 05	Chabot Space and Science Center—Oakland, CA	9	0	0
18 Aug 05	18 Aug 05	Chabot Space and Science Center—Oakland, CA	38	0	0

A125. Ulysses: Teacher Training

Theme(s): Heliophysics
Msn/Prgm: Ulysses[B71], Voyager[B72]
Description: Ulysses team members participate in training educators.
Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.

Primary URL: <http://ulysses.jpl.nasa.gov>

Secondary URL: <http://voyager.jpl.nasa.gov>

Scientist(s):	Mr. Fernando Castro	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. James Connell	University of New Hampshire	Durham, NH
	Dr. Dave McComas	Southwest Research Institute	San Antonio, TX
	Dr. Bruce McKibben	University of Chicago	Chicago, IL
	Mr. Paul Williams	The Governor's Institutes of Vermont	Montpelier, VT
	Dr. Thomas Zurbuchen	University of Michigan	Ann Arbor, MI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	15 Oct 04	University of Michigan—Ann Arbor, MI	25	0	0
02 Mar 05	02 Mar 05	North County Education Services—Gorham, NH	20	0	0
09 Mar 05	09 Mar 05	Littleton Learning Center—Littleton, NH	30	0	0
26 Apr 05	26 Apr 05	Profile High School—Bethlehem, NH	61	0	0
15 Jul 05	22 Jul 05	Los Alamos National Laboratory— Los Alamos, NM	10	0	0

A126. "What Is Your Cosmic Connection to the Elements?": Educator Workshop

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: This educator workshop introduces teachers to the cosmic origins of the chemical elements—how the elements were created by the Big Bang, stellar processes, cosmic-ray interactions, and other processes. Teachers engage in discussion and activities about the elemental composition of the universe and their own "cosmic connections" between elements on Earth and their origins in space. These workshops were conducted by E/PO professionals and the HEASARC Educator Ambassador.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://imagine.gsfc.nasa.gov/docs/teachers/elements/>

Secondary

URL: <http://epo.sonoma.edu/ambassadors>

Scientist(s):	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Rosemary Millham	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Sara Mitchell	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Cheryl Niemela	Rogers High School	Puyallup, WA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	16	18	0
30 Jun 05	30 Jun 05	NASA Goddard Space Flight Center— Greenbelt, MD	22	0	0
15 Jul 05	15 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	27	0	0
18 Jul 05	18 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	13	0	0

A127. White Dwarfs and the Age of Our Galaxy: A Professional Development Experience for Teachers

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: The first of a planned series of workshops for secondary school science teachers was conducted at McDonald Observatory in July 2005. In preparation for the workshop, new instructional materials on white dwarfs and the age of our galaxy were prepared and pilot-tested. Thirteen teachers from Arizona, Delaware, and Texas performed these standards-aligned activities at the workshop in preparation for using them within their own classrooms. During four nights of observing, the participants made CCD images at the 0.8-meter telescope and reduced the data with personal computers using easily available image-reduction software. Working in teams, they created a color magnitude diagram for an open cluster and found several white dwarf candidates within the cluster. With guidance, they used the work of the White Dwarf Luminosity Function Collaboration, which fostered this workshop, to estimate the age of the galaxy. The workshop included tours of other observatory facilities, practical exercises with small telescopes, and time to reflect on the instructors' own teaching practices. Evaluation on the workshop and the use of the instructional materials is continuing. The instructional materials are being modified for another program on white dwarf stars (Argos online).

Lead: Dr. Theodore von Hippel, University of Texas at Austin, Austin, TX 78712. E-mail: ted@astro.as.utexas.edu. Phone: 512-471-3436.

Contact: Dr. Mary Hemenway, University of Texas at Austin, Austin, TX 78712. E-mail: marykay@astro.as.utexas.edu. Phone: 512-471-1309.

Scientist(s):	Dr. Mary Kay Hemenway	University of Texas at Austin	Austin, TX
	Dr. Harry Shipman	University of Delaware	Newark, DE
	Dr. Theodore von Hippel	University of Texas at Austin	Austin, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Jun 05	03 Jul 05	McDonald Observatory—Fort Davis, TX	13	0	0

A128. Workshop on Topics in Modern Astronomy

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: MI Initiative[B27], SRT[B28], GLAST[B47], Suzaku[B68], ACE[B73]

Description: GSFC provided five speakers for a workshop for middle and high school teachers and the local amateur astronomy club (Back Bay Amateur Astronomers).

Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://www.nsu.edu>

Secondary

URL: <http://groups.hamptonroads.com/bbaa>

Scientist(s):	Ms. Beth Barbier	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Louis Barbier	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Jerry Bonnell	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Eric Christian	NASA Headquarters Science Mission Directorate	Washington, DC
	Dr. Don Kniffen	NASA Headquarters Science Mission Directorate	Washington, DC
Partner(s):	Norfolk State University		Norfolk, VA
	University of Virginia		Charlottesville, VA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
29 Jun 05	29 Jun 05	Norfolk State University—Norfolk, VA	40	0	0

A129. XMM-Newton: High-Energy Teacher Workshops

Theme(s): Astrophysics

Msn/Prgm: XMM[B69]

Description: XMM-Newton teacher workshops are primarily conducted by XMM-Newton Educator Ambassadors. These Educator Ambassadors are part of the SEU Educator Ambassador program, coordinated by the E/PO group at Sonoma State University (SSU). The Educator Ambassadors are trained biyearly at SSU to help develop, test, disseminate, and conduct workshops for teachers using materials from all SEU missions. Some presentations are also conducted by SSU E/PO group personnel.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
Phone: 707-664-2655.

Primary URL: <http://xmm.sonoma.edu>

Secondary

URL: http://heasarc.gsfc.nasa.gov/docs/xmm_lc/

Scientist(s):	Mr. Tom Estill	Chabot Space and Science Center	Oakland	CA
	Mr. Sean Greenwalt	Sonoma State University	Rohnert Park	CA
	Ms. Margaret Holzer	Chandra X-ray Center	Cambridge	MA
	Dr. Philip Plait	Sonoma State University	Rohnert Park	CA
	Ms. Darlette Powell	University of Washington	Seattle	WA
	Dr. Christine Anne Royce	Shippensburg University	Shippensburg	PA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park	CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	14 Oct 04	New Jersey Science Teachers Association Conference—Somerset, NJ	15	0	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	2134	0
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	15	0	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	800	2200	0
01 Dec 04	03 Dec 04	Pennsylvania Science Teachers Association Conference—Hershey, PA	15	0	0
16 Feb 05	16 Feb 05	Chabot Space and Science Center—Oakland, CA	8	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	42	0	0
30 Apr 05	30 Apr 05	Chabot Space and Science Center—Oakland, CA	10	0	0
06 Jul 05	15 Jul 05	Rural Academy for Math Teachers—Shippensburg, PA	82	0	0
15 Jul 05	15 Jul 05	Chabot Space and Science Center—Oakland, CA	28	0	0
19 Jul 05	19 Jul 05	Chabot Space and Science Center—Oakland, CA	7	0	0
21 Jul 05	27 Jul 05	McDonald Observatory—Fort Davis, TX	27	0	0
01 Aug 05	01 Aug 05	Shippensburg University—Shippensburg, PA	5	0	0

Educator Professional Development-Long Duration

A130. Alabama A&M Earth System Science Education Alliance (ESSEA): K-4 Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K-12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model, are delivered over the Internet,

and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	Alabama A&M University—Normal, AL	14	0	0

A131. Chandra E/PO Grant: Chandra Astrophysics Institute (CAI)

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: The Chandra Astrophysics Institute is a year-long program for underserved, motivated high school students and teachers designed to prepare student/teacher groups to be immersed in authentic x-ray astronomy research projects under the supervision of MIT researchers and science educators. During a monthlong summer school, students and teachers learn basic physics concepts (circular motion, energy conservation, the ideal gas law, characteristics of light, etc.) in the context of topics in modern astrophysics (stellar models, stellar evolution, supernovae, x-ray detectors, and telescope construction) using a nontraditional, exploratory approach that models the approach taken in research where there are no absolutely "correct" answers. They are also introduced to practical skills in data analysis through guided exploration of real x-ray data and building models of the sources with MIT space scientists. During the following academic year, teams of students and their teacher mentors apply these research skills to projects exploring another x-ray source with data from the Chandra X-ray Observatory and/or other x-ray astronomy missions, using a Massachusetts Department of Education online community to share their results and frustrations. Final results will be presented at a communitywide forum at the Lynn, MA, City Hall in spring 2006.

Contact: Mr. Mark Hartman, Massachusetts Institute of Technology, Cambridge, MA 02139.

E-mail: mhartman@space.mit.edu. Phone: 617-258-8258.

Primary URL: <http://space.mit.edu/EPO/CAI2005/>

Primary CNE:	http://space.mit.edu/EL-07/01/2009		
Scientist(s):	Dr. Fred Baganoff	Massachusetts Institute of Technology	Cambridge, MA
	Mr. John Belcher	Massachusetts Institute of Technology	Cambridge, MA
	Mr. Sebastian Heinz	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Walter Lewin	Massachusetts Institute of Technology	Cambridge, MA
	Mr. Michael Noble	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Michael Nowak	Massachusetts Institute of Technology	Cambridge, MA
	Mr. Andrew Young	Massachusetts Institute of Technology	Cambridge, MA
Partner(s):	Rutgers University		Piscataway, NJ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jul 05	01 Aug 05	Massachusetts Institute of Technology— Cambridge, MA	31	0	0

A132. Chicago Teachers' Advisory

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: DePaul B/F[B37]

Description: The Chicago Teachers' Advisory is a partnership between the DePaul Broker/Facilitators and Chicago teachers whose goal is to develop ways to bring space science to the schoolchildren of Chicago. Advisory meetings called Space Science Symposia occur 1–2 times a year and attract a broad group of teachers representative of the Chicago Public School System. Sessions are a mixture of space science presentations by local scientists and discussions in areas such as curriculum and professional development, NASA resources, and communication. Other special events occur as needs and opportunities arise. Planning for symposia and other events is done in monthly meetings by a small group of teachers known as Teacher Consultants.

Lead: Dr. Carolyn Narasimhan, DePaul University, Chicago, IL 60604. E-mail: cnarasim@depaul.edu.

Phone: 773-325-1854.

Scientist(s):	Ms. Lindsay Bartolone	Adler Planetarium and Astronomy Museum	Chicago, IL
	Dr. Bernhard Beck-Winchatz	DePaul University	Chicago, IL
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Trina Ray	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Oct 04	02 Oct 04	DePaul University—Chicago, IL	74	0	0
02 Oct 04	30 Sep 05	DePaul University—Chicago, IL	4	120	0
02 Oct 04	30 Sep 05	DePaul University—Chicago, IL	10	0	0
02 Oct 04	30 Sep 05	DePaul University—Chicago, IL	15	0	0
02 Oct 04	30 Sep 05	DePaul University—Chicago, IL	15	120	0
02 Oct 04	30 Sep 05	DePaul University—Chicago, IL	20	0	0
26 Feb 05	26 Feb 05	DePaul University—Chicago, IL	77	0	0
02 Apr 05	25 Apr 05	DePaul University—Chicago, IL	20	0	0

A133. College and University Earth System Science Education Program

Theme(s): Heliophysics
 Msn/Prgm: ESSE 21[B13]
 Description: Earth System Science Education for the 21st Century (ESSE 21), a leader in systemic change for interdisciplinary Earth system science education at the undergraduate level, emphasizes the understanding of Earth as a system of interrelated air, water, land, life, and social processes. Led by the Universities Space Research Association (USRA) and sponsored by NASA, ESSE 21 offers colleges and universities small, competitive grants to develop Earth system science courses, curricula, and degree programs. ESSE 21 engages a collaborative community of educators and scientists as partners in jointly developing and sharing courses and learning resources focused on Earth system science research and applications. ESSE 21 places special emphasis on reaching Minority-Serving Institutions (MSIs). ESSE 21 participants stimulate their students' critical and creative thinking with Earth system models, research results, data, and visualizations available from NASA and the broader interdisciplinary community engaged in Earth system science. These resources increase opportunities for teaching and learning about Earth as a system while developing competency in underlying STEM principles. Expanding Earth system science at our Nation's universities is critical to developing a workforce qualified to address our society's challenging Earth system and environmental problems while fostering a scientifically literate citizenry that can make informed decisions about these problems. ESSE 21 actively engages Minority-Serving Institutions as community members and partners, providing a rich and supportive framework to explore and develop materials and courses that strive for educational excellence and meet specific minority institutional needs. ESSE 21 fosters deep and long-term relationships among research and education colleagues from around the country.

Lead: Dr. Donald Johnson, Universities Space Research Association, Columbia, MD 21044-3498.

E-mail: donj@ssec.wisc.edu. Phone: 608-262-2538.

Contact: Mr. Martin Ruzek, Universities Space Research Association, Whitelaw, WI 54247.

E-mail: ruzek@usra.edu. Phone: 920-732-3316.

Primary URL: <http://esse21.usra.edu/ESSE21>

Partner(s): Austin College Sherman, TX
 California State University, Monterey Bay Seaside, CA
 Clark Atlanta University Atlanta, GA
 Howard University Washington, DC
 Jackson State University Jackson, MS
 Lehigh University Bethlehem, PA
 Loma Linda University Loma Linda, CA
 Morgan State University Baltimore, MD
 New Mexico State University, Las Cruces Las Cruces, NM
 Polytechnic University of Puerto Rico San Juan, Puerto Rico
 University of Alaska, Fairbanks Fairbanks, AK
 University of Hawaii at Hilo Hilo, HI
 University of Illinois at Urbana-Champaign Urbana, IL
 University of Miami Miami, FL
 University of Missouri-Kansas City Kansas City, MO
 University of Northern Colorado Greeley, CO
 University of Wyoming Laramie, WY

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Aug 05	07 Aug 05	University of Alaska, Fairbanks—Fairbanks, AK	75	0	0

A134. College of St. Scholastica Earth System Science Education Alliance (ESSEA): K–4 Course

Theme(s): Earth Science
 Msn/Prgm: ESSEA[B12]
 Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and preservice educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.

E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	College of St. Scholastica—Duluth, MN	3	0	0
15 Jan 05	15 May 05	College of St. Scholastica—Duluth, MN	3	0	0

A135. Developing a District-Wide Elementary-University Space Science Education Partnership

Theme(s): Heliophysics, Planetary
 Msn/Prgm: SRT[B28]
 Description: The E/PO activity has developed a partnership with UCLA and the Culver City Unified School District's elementary schools. The goal of the proposal is to "Bring Space Into the Classroom." We have created professional development opportunities for K–5 teachers to deepen their knowledge and confidence in presenting space

science topics. Space science will be used as an avenue to teach reading, math, problem solving, and critical thinking through Project FIRST (Fostering Reading through Science and Technology).

Lead: Dr. Mark Moldwin, University of California, Los Angeles, Los Angeles, CA 90095.
E-mail: mmoldwin@igpp.ucla.edu. Phone: 310-825-5556.

A136. Earth System Science Education Alliance (ESSEA): Hampton University 5–8 Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: Earth System Science Education Alliance (ESSEA) is a professional development program for K–12 educators. Participating universities, colleges, and science organizations offer Earth system science online graduate courses to inservice and preservice educators. These courses use an innovative instructional design model; are delivered over the Internet and feature student-centered, knowledge-building, virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	31 Dec 04	Hampton University—Hampton, VA	45	0	0
15 Jan 05	15 May 05	Hampton University—Hampton, VA	30	0	0

A137. Exploration of the Solar System: A New View of Jupiter

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: A two-credit, one-semester course was developed in collaboration with the Lead: School District (Crystal Lake, IL) for upper elementary (grades 4, 5, and 6) science and mathematics teachers. The course specifically addressed the need for teachers in the northern Illinois region to expand upon the astronomy/solar system curricular themes to meet district science standards and teacher recertification requirements. Jupiter data were used as part of the course material to enhance teacher understanding of other planets in our own solar system, with a particular emphasis on the unique role and nature of gas giants such as Jupiter. As a final project, fourth-grade teachers developed a unit that focused on Jupiter. The course section (lecture) focusing on Jupiter and gas giants was also presented to a general audience by Dr. Limaye in Pune, India, as well as to an audience of minority high school students at the University of Wisconsin-Madison Geology Museum.

Contact: Ms. Rosalyn Pertzborn, University of Wisconsin-Madison, Madison, WI 53706. E-mail: rosep@ssec.wisc.edu.
Phone: 608-265-4160.

Scientist(s):	Dr. Sanjay Limaye	University of Wisconsin-Madison	Madison, WI
	Ms. Rosalyn Pertzborn	University of Wisconsin-Madison	Madison, WI
	Dr. Lawrence Sromovsky	University of Wisconsin-Madison	Madison, WI

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Jan 05	31 May 05	School District 47 Crystal Lake— Crystal Lake, IL	33	0	0
17 Jan 05	17 Jan 05	Indian Institute of Tropical Meteorology— Pune, India	70	0	0
01 Jun 05	14 Jul 05	University of Wisconsin Geology Museum— Madison, WI	0	650	0

A138. Imaging Neptune

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: A two-credit, one-semester course was developed in collaboration with the lead School District (Crystal Lake, IL) for upper elementary (grades 4, 5, and 6) science and mathematics teachers. The course specifically addressed the need for teachers in the northern Illinois region to expand upon the astronomy/solar system curricular themes to meet district science standards and teacher recertification requirements. Authentic Neptune data acquired between 1996 and 2004 (Sromovsky) were used to develop a model curricular unit to enable teachers to gain a broader understanding of the concept of weather by exploring seasonal changes on another planet (Neptune) in our own solar system. Teachers were required to use actual data to design grade-specific learning modules as a final project for districtwide usage.

Lead: Dr. Lawrence Sromovsky, University of Wisconsin-Madison, Madison, WI 53706.
E-mail: lsromovsky@ssec.wisc.edu. Phone: 608-263-6785.

Contact: Dr. Sanjay Limaye, University of Wisconsin-Madison, Madison, WI 53706. E-mail: sanjayl@ssec.wisc.edu.
Phone: 608-262-9541.

Primary URL: <http://tellus.ssec.wisc.edu/outreach>

Scientist(s):	Dr. Sanjay Limaye	University of Wisconsin-Madison	Madison, WI
	Ms. Rosalyn Pertzborn	University of Wisconsin-Madison	Madison, WI
	Dr. Lawrence Sromovsky	University of Wisconsin-Madison	Madison, WI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jan 05	31 May 05	School District 47 Crystal Lake— Crystal Lake, IL	35	0	0

A139. Kentucky Earth System Science Education Alliance (ESSEA): 5–8 Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and preservice educators. The courses use an innovative instructional design model; are delivered over the Internet and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	Morehead State University—Morehead, KY	23	0	0

A140. Kentucky Earth System Science Education Alliance (ESSEA): 9–12 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and preservice educators. The courses use an innovative instructional design model; are delivered over the Internet and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	Western Kentucky University— Bowling Green, KY	14	0	0

A141. Kentucky Earth System Science Education Alliance (ESSEA): K–4 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and preservice educators. The courses use an innovative instructional design model; are delivered over the Internet and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	Morehead State University—Morehead, KY	22	0	0

A142. Los Alamos Space Science Outreach (LASSO) Program

Theme(s): Heliophysics
Msn/Prgm: ACE[B73]
Description: LASSO is a teacher enhancement program that involves teachers from grades 4–12 in the process of designing and creating space science activities for inclusion in an online solar system activity book. Selected teachers are involved in a 15-day summer institute (July 11–15, July 18–22, August 1–5). All institute workshops are held at Los Alamos National Laboratory.

Lead: Dr. John Steinberg, Los Alamos National Laboratory, Los Alamos, NM 87545. E-mail: jsteinberg@lanl.gov.
Phone: 505-667-5308.

Primary URL: <http://education.lanl.gov/programs/lasso>

Scientist(s):	Mr. Philip Barker	Los Alamos National Laboratory	Los Alamos, NM
	Dr. Dot Delapp	Los Alamos National Laboratory	Los Alamos, NM
	Dr. William Feldman	Los Alamos National Laboratory	Los Alamos, NM
	Dr. Jack Gosling	Los Alamos National Laboratory	Los Alamos, NM
	Dr. Dave McComas	Southwest Research Institute	San Antonio, TX
	Dr. Ruth Skoug	Los Alamos National Laboratory	Los Alamos, NM

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Jul 05	05 Aug 05	Los Alamos National Laboratory— Los Alamos, NM	10	0	0

A143. Lunar and Planetary Institute (LPI): Educator Field Experiences

Theme(s): Astrophysics, Planetary

Msn/Prgm: SRT[B28]

Description: Twenty-eight educators explored Earth's extreme environments to better understand the conditions in which life can thrive and to extend that knowledge to evaluating the possibility of past or present life on other planets. The educators, primarily middle and high school teachers of biology and life sciences, visited Carson Sink salt flats, east of Reno, NV, to research and sample hypersaline environments. Two additional days of fieldwork concentrated on the alkaline and thermal extreme environments of the Mono Lake, CA, region. During the field experience, planetary scientists, a microbial ecologist, and an astrobiologist helped participants build a picture of the intricate interactions of geology, chemistry, biology, and ecology in these unique environments and their connections to conditions on other planets. The LPI conducts these annual summer field workshops to provide K–12 educators with the opportunity to develop a deeper understanding and excitement about planetary processes through firsthand experiences. These workshops combine field observations with content lectures and discussions. The field experiences enhance participants' abilities to undertake scientific inquiry in the classroom, help educators develop a deeper understanding of scientific content and process, and create an environment in which teachers and scientists interact as colleagues. During the workshop, participants undertake hands-on, standards-based activities designed to enhance student learning. Discussions focus on challenges and ideas for effective classroom implementation. To achieve a long-term impact, participants transfer their experiences into their classroom and share what they learn with colleagues. The participants develop a network with which they can interact. Field journals, links to activities and resources, photographs, and other information can be found at the listed URLs.

Lead: Dr. Allan Treiman, Lunar and Planetary Institute, Houston, TX 77058–1113. E-mail: treiman@lpi.usra.edu. Phone: 281-486-2117.

Primary URL: http://www.lpi.usra.edu/education/other_programs/ed_fieldtrips.shtml

Secondary

URL: <http://www.lpi.usra.edu/education/fieldtrips/2005/>

A144. LWS: STEM Institute for Administrators

Theme(s): Heliophysics

Msn/Prgm: LWS/PO[B90]

Description: This workshop provides administrators with the opportunity to meet scientists, engineers, and educators from NASA GSFC who bring the latest NASA research and resources for the education community. This workshop allowed administrators to experience firsthand the work that Star Partners teachers perform and the staff development they undergo every summer with our education outreach program. These practical applications are supported by national and regional standards. For the past decade, NASA has focused significant attention on school improvement so we can serve as contributors in student learning and interest in STEM professions. This workshop is specially designed for school system administrators to greatly enhance the STEM teaching that will directly impact students' learning in schools.

Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://lws.gsfc.nasa.gov>

Secondary

URL: <http://stargazers.gsfc.nasa.gov>

Scientist(s):	Ms. Sara Brown	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Gilberto Colon	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Omar Eaton	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Evelina Felicite-Maurice	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Juan Gonzalez	University of Puerto Rico at Mayagüez	Mayagüez, Puerto Rico
	Dr. Charles Mercer	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Laura Ratta	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Maria Schwarz	University of Puerto Rico at Mayagüez	Mayagüez Puerto Rico
	Mr. Mitchell Watkins	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Aug 05	19 Aug 05	NASA Goddard Space Flight Center— Greenbelt, MD	35	3	0

A145. Mars: Formal Educator Field Trips

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars field trips take K–12 educators to sites on Earth that are similar to Mars for intensive exploration and comparison, using data from past and current Mars missions. They typically last for a few days and cover more materials than the formal educator workshops, so they are often follow-on, indepth professional development

opportunities for educators who are reached through the workshops. Standards-aligned, hands-on, inquiry-based activities are presented interactively for use in classrooms to support science, technology, mathematics, and geology education. The complementary goals, science discoveries, and technological innovations of missions in the Mars Exploration Program are also presented in relation to what NASA hopes to learn about Mars through the long-term exploration of the climate and geology of the Red Planet and its potential as a habitat for past, present, or future life. The educational knowledge and skills necessary to explore Mars are also presented to assist educators in inspiring Mars explorers of the future. Classroom activities and resources are also distributed for implementation in the classroom.

Contact: Ms. Sheri Klug, Arizona State University, Tempe, AZ 85287-1404. E-mail: sklug@asu.edu.
Phone: 480-727-6495.

Primary URL: <http://mars.jpl.nasa.gov/classroom>

Secondary

URL: <http://marsed>

Scientist(s):	Dr. Josh Bandfield	Arizona State University	Tempe, AZ
	Ms. Kelly Bender	Arizona State University	Tempe, AZ
	Dr. Phil Christensen	Arizona State University	Tempe, AZ
	Mr. Chris Eisinger	Arizona State University	Tempe, AZ
	Mr. Tim Glotch	Arizona State University	Tempe, AZ
	Ms. Meg Hufford	Arizona State University	Tempe, AZ
	Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Ms. Amy Knudson	Arizona State University	Tempe, AZ
	Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Gaylon McSmith	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Deanne Rogers	Arizona State University	Tempe, AZ
	Ms. Paige Valderrama	Arizona State University	Tempe, AZ
	Mr. Keith Watt	Arizona State University	Tempe, AZ
	Mr. Shawn Wright	Arizona State University	Tempe, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
24 Feb 05	24 Feb 05	Arizona State University—Tempe, AZ	51	0	0
28 Jul 05	30 Jul 05	Arizona State University—Tempe, AZ	28	0	0

A146. Mid-continent Research for Education and Learning (McREL) Earth System Science Education Alliance (ESSEA): 5–8 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	Mid-continent Research for Education and Learning—Aurora, CO	8	0	0

A147. Minnesota Earth System Science Education Alliance (ESSEA): 9–12 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	University of Minnesota—Minneapolis, MN	22	0	0

A148. NASA Astrobiology Institute (NAI): NAI Workshops and Summer Institutes-Teachers Experience Astrobiology

Theme(s): Astrophysics, Planetary

Msn/Prgm: NAI[B62]

Description: In order to train the next generation of astrobiologists, the teachers of those future researchers need to be exposed to astrobiology and supported when they work with the material in their classrooms. Across the 16 lead Teams of the NASA Astrobiology Institute (NAI), a variety of engaging experiences for K–12 teachers across the country were offered. Five NAI lead Teams (U of Hawai'i, SETI Institute, Penn State, Carnegie Institution of Washington, and the Marine Biological Laboratory) conducted extended summer training institutes for teachers. From Hawaii to Massachusetts, these hands-on, in-the-field, in-the-lab workshops featured cutting-edge astrobiology research delivered by NAI scientists and education professionals, as well as inquiry- and standards-based activities. NAI's lead Teams also participated in NSTA regional and national conventions, delivering five astrobiology workshops. In particular, NAI's NASA Goddard Space Flight Center lead Team delivered astrobiology content to the NASA Explorer School Institutes at two NSTA conventions. NAI's U of Arizona lead Team produces an online graduate course in astrobiology for teachers every semester. Four NAI lead Teams hosted astrobiology workshops at their State's annual science teachers conferences, in addition to nine other teacher workshops at venues such as the American Society for Microbiology annual conference, the American Geophysical Union annual meeting, and UT Dallas.

Lead: Ms. Krisstina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.
E-mail: Krisstina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.
E-mail: dscalice@mail.arc.nasa.gov.

Primary URL: <http://nai.nasa.gov/teachers/>

A149. National Center for Atmospheric Research (NCAR) High-Altitude Observatory: Teachers-in-Residence Program for K–12 Outreach

Theme(s): Heliophysics
Msn/Prgm: SRT[B28]
Description: Two high school teachers have worked with NCAR scientists and University Corporation for Atmospheric Research (UCAR) Education and Outreach (EO) educators to develop, classroom-test, and finalize online resources relating Sun-Earth Connection science to physical science and astronomy courses taught to middle and high school students. One product of their efforts is a set of high school-level, standards-aligned lessons adapted from the COMET program's Aurora Module, originally created for advanced undergraduate students. These Web-based lessons feature COMET's exceptional animations and content describing the motion of particles in magnetic fields. They integrate COMET resources with related content about space weather and Earth's magnetosphere found on the Windows to the Universe (W2U) Web site. A set of physics problems complements these lessons. The second product of the Teachers-In-Residence Program leverages the COMET Aurora module to focus high school students on creating graphs and analyzing data using a logarithmic scale while learning about the atmosphere's temperature profile; the distribution of a variety of chemical species throughout the troposphere, mesosphere, and ionosphere; and the reasons why different chemical species occur at different altitudes in Earth's atmosphere. Two additional teacher evaluators were contracted to assess the appropriateness of these materials for middle and high school science classes. The resources are disseminated on the Windows to the Universe Web site, on the NCAR/UCAR Web site, and via CD-ROM to teachers attending Windows to the Universe workshops at regional and national NSTA workshops. These new resources are also linked to the Sun-Earth Connection section of the NCAR Climate Discovery Exhibit Teacher's Guide. The Education and Outreach Office at the University Corporation for Atmospheric Research has produced a CD-ROM containing these and other NASA resources. It will be distributed to teachers attending workshops about magnetism at regional and national NSTA conferences.

Lead: Dr. Art Richmond, University Corporation for Atmospheric Research, Boulder, CO 80305.
E-mail: richmond@ucar.edu. Phone: 303-497-1570.

Contact: Ms. Susan Foster, University Corporation for Atmospheric Research, Boulder, CO 80305.
E-mail: susanf@ucar.edu. Phone: 303-497-2595.

Primary URL: http://www.windows.ucar.edu/tour/link=/earth/Magnetosphere/tour/tour_e
Secondary URL: http://www.windows.ucar.edu/tour/link=/teacher_resources/graphs/teach_

Scientist(s): Dr. Astrid Maute University Corporation for Atmospheric Research Boulder, CO
Dr. Art Richmond University Corporation for Atmospheric Research Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 May 05	15 Sep 05	Aurora Central High School—Aurora, CO	63	300	0
15 May 05	15 Sep 05	Broomfield High School—Broomfield, CO	33	300	0
01 Sep 05	01 Sep 05	University of Colorado, Boulder—Boulder, CO	4	0	0

A150. Nebraska Earth System Science Education Alliance (ESSEA): 5–8 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.
Primary URL: <http://www.cet.edu/essea/>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	University of Nebraska at Omaha— Omaha, NE	9	0	0
15 Jan 05	15 May 05	University of Nebraska at Omaha—Omaha, NE	8	0	0

A151. Nebraska Earth System Science Education Alliance (ESSEA): K–4 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	University of Nebraska at Omaha—Omaha, NE	4	0	0
15 Jan 05	15 May 05	University of Nebraska at Omaha—Omaha, NE	5	0	0

A152. New Mexico State University Earth System Science Education Alliance (ESSEA): K–4 Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	New Mexico State University, Las Cruces— Las Cruces, NM	28	0	0
15 Jan 05	15 May 05	New Mexico State University, Las Cruces— Las Cruces, NM	26	0	0

A153. Plymouth Earth System Science Education Alliance (ESSEA): 5–8 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	Plymouth State University—Plymouth, NH	4	0	0

A154. Plymouth Earth System Science Education Alliance (ESSEA): K–4 Online Course

Theme(s): Earth Science
Msn/Prgm: ESSEA[B12]
Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.
Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	31 Dec 04	Plymouth State University—Plymouth, NH	2	0	0

A155. Project ASTRO in Bubb Elementary School, Mountain View

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SOFIA[B53]

Description: Project ASTRO is a national program run by the Astronomical Society of the Pacific (ASP); it sponsors partnerships between professional astronomers and local teachers and their classes. The astronomer-teacher pairs receive special training at a workshop. The astronomer visits the classroom at least four times during the school year, providing curricular support for astronomy and science teaching in general and sometimes using “canned” activities produced and updated by the ASP.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Primary URL: <http://www.sofia.usra.edu/Edu/edu.html>

Secondary

URL: http://astrosociety.org/education/astro/project_astro.html

Scientist(s): Dr. Dana Backman NASA Ames Research Center

Partner(s): Astronomical Society of the Pacific

Moffett Field, CA
San Francisco, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Dec 04	16 Dec 04	Bubb Elementary School—Mountain View, CA	22	0	0
06 Jan 05	06 Jan 05	Bubb Elementary School—Mountain View, CA	22	0	0
13 Jan 05	13 Jan 05	Bubb Elementary School—Mountain View, CA	22	0	0
20 Jan 05	20 Jan 05	Bubb Elementary School—Mountain View, CA	22	0	0
27 Jan 05	27 Jan 05	Bubb Elementary School—Mountain View, CA	22	0	0
03 Feb 05	03 Feb 05	Bubb Elementary School—Mountain View, CA	22	0	0
13 Apr 05	13 Apr 05	Bubb Elementary School—Mountain View, CA	52	0	0

A156. San Jose State Earth System Science Education Alliance (ESSEA): 9–12 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.

E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
15 Jan 05	15 May 05	San Jose State University—San Jose, CA	3	0	0

A157. Solar System Educators Program (SSEP)

Theme(s): Planetary

Msn/Prgm: JPL SSE[B96]

Description: The goal of the Solar System Educators Program is to reach diverse pre- and inservice teachers through workshops instructing them on NASA/JPL mission-related standards-based classroom activities. Support for this program comes from Cassini, Dawn (through Discovery), Deep Impact, Deep Space Network, Genesis, Mars (thematically), MESSENGER (through Discovery), New Horizons (through Discovery), Solar System Exploration Forum, Stardust, Ulysses, and Voyager. Currently, there are 57 Solar System Educators in 37 States.

Lead: Ms. Kay Ferrari, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Kay.A.Ferrari@jpl.nasa.gov. Phone: 818-354-7581.

Primary URL: <http://solarsystem.nasa.gov/ssep>

Scientist(s): Ms. Kay Ferrari NASA Jet Propulsion Laboratory

Pasadena, CA

A158. Space Science Education in New England Colleges

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: The college setting is often the only place where students are exposed to astronomy and space science in any substantive way. Indeed, astronomy courses tend to be very popular, with as many as 25 percent of all college students having taken at least one such course during a typical 4-year undergraduate career. As part of its mission, the New England Space Science Initiative in Education (NESSIE) Broker/Facilitator is helping to enhance the quantity and quality of space science education in colleges and universities. The involvement of NASA-supported space scientists is critical to this effort. This year, NESSIE personnel enabled a seminar course on “Space Science Education” that was designed to serve the needs of students in education and museum studies programs. The experiences from this course are being used as input for a survey of similar programs nation-

wide. NESSIE personnel also brokered and facilitated a seminar course on "Space Science and Technology." This course was especially popular with engineering students.

Lead: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.
Phone: 617-589-4228.

Primary URL: <http://www.mos.org/nessie>

Secondary

URL: <http://www.tufts.edu/as/astronomy/>

Scientist(s):	Mr. Timothy Barker	Wheaton College	Norton, MA
	Dr. Daniel Barry	NASA Johnson Space Center	Houston, TX
	Dr. Hale Bradt	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Roseanne DiStefano	Tufts University	Medford, MA
	Ms. Noreen Grice	Museum of Science	Boston, MA
	Dr. Mark Heyer	University of Massachusetts	Amherst, MA
	Dr. Jeffrey Hoffman	NASA Johnson Space Center	Houston, TX
	Dr. Samuel Kounaves	Tufts University	Medford, MA
	Dr. Benjamin Lane	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Thomas Megeath	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Simon Steel	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. William Waller	Museum of Science	Boston, MA
	Dr. William Waller	Tufts University	Medford, MA
	Dr. Paul Withers	Boston University	Boston, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	01 Oct 04	Tufts University—Medford, MA	25	0	0
01 Oct 04	17 Dec 04	Tufts University—Medford, MA	15	0	0
22 Oct 04	22 Oct 04	Tufts University—Medford, MA	15	0	0
05 Nov 04	05 Nov 04	Tufts University—Medford, MA	25	0	0
03 Dec 04	03 Dec 04	Tufts University—Medford, MA	15	0	0
10 Dec 04	10 Dec 04	Tufts University—Medford, MA	20	0	0
18 Jan 05	06 May 05	Tufts University—Medford, MA	7	0	0
17 Feb 05	17 Feb 05	Salem State College—Salem, MA	171	0	0
25 Feb 05	25 Feb 05	Tufts University—Medford, MA	18	0	0
18 Mar 05	18 Mar 05	Tufts University—Medford, MA	20	0	0
01 Apr 05	01 Apr 05	Tufts University—Medford, MA	20	0	0
08 Apr 05	08 Apr 05	Tufts University—Medford, MA	20	0	0
15 Apr 05	15 Apr 05	Tufts University—Medford, MA	50	0	0
29 Apr 05	29 Apr 05	Tufts University—Medford, MA	20	0	0
29 Apr 05	29 Apr 05	Tufts University—Medford, MA	25	0	0
07 Jun 05	07 Jun 05	Tufts University—Medford, MA	35	0	0
02 Sep 05	02 Sep 05	Tufts University—Medford, MA	30	0	0

A159. "Stardust, Supernovae, and Earth . . . Oh My!"

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: We are currently developing a series of standards-based educational CDs targeting grade levels K–5, 6–8, and 9–12. The topics will include stellar evolution, dust formation, presolar grains, solar system evolution, and extraterrestrial materials and will incorporate the new discoveries from the Origins of Solar Systems Program. The CDs will provide grade-appropriate, standards-based teacher guides, pre- and posttests, student exercises, and activities. The project will encompass three phases: (1) the development of the educational materials; (2) assessment of the materials, first in teacher inservices at our partner institution (Pattonville School District) and then regionally by incorporating the materials directly into public shows at the Pattonville Observatory and Planetarium; and (3) dissemination of the materials (after they are developed, assessed, and appropriately modified) through presentation at local, State, and national conferences (specifically NSTA) and the hosting of a Web site.

Lead: Dr. Kathy Kitts, Washington University, St. Louis, MO 63130. E-mail: kkitts@niu.edu. Phone: 815-753-5990.

Primary URL: <http://nightsky.psdr3.org>

Secondary

URL: <http://nightsky.psdr3.org/SuperNova.html>

Scientist(s): Ms. Kathy Kitts Washington University St. Louis, MO

Partner(s): Pattonville School District St. Louis, MO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Pattonville School District—St. Louis, MO	1172	51267	0
13 Mar 05	13 Mar 05	Before the First Day of School: Pre-Service Teacher Prep and Role of Earth and Space Science Community—Houston, TX	0	40	0
01 Jun 05	30 Jun 05	Pattonville School District—St. Louis, MO	8	0	0

A160. Study of Variable Stars as a Pathway to Teaching Physical Science for Middle and High School Teachers

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: During this 5-week summer program, middle and high school teachers and preservice teachers gained hands-on experience in astronomy, using telescopes mounted with CCDs to monitor variable stars. They also reviewed basics on light, optics, and telescopes and learned experiments to do in their own classrooms. They contributed to scientific research by submitting their observations to the Web site of the American Association of Variable Star Observers (AAVSO), a database used by astronomers from around the world.

Lead: Dr. Beverly Smith, East Tennessee State University, Johnson City, TN 37614. E-mail: beverly@nebula.etsu.edu. Phone: 423-439-8418.

Scientist(s): Dr. Gary Henson East Tennessee State University Johnson City, TN
Dr. Don Luttermoser East Tennessee State University Johnson City, TN

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
07 Jun 05	07 Jul 05	East Tennessee State University— Johnson City, TN	5	0	0

A161. Sun-Earth Day Workshop

Theme(s): Heliophysics

Msn/Prgm: MARSSB[B39]

Description: This activity involved a coordinated effort led by Dr. William Mackie, who was on a NASA administrative exchange program from NASA Glenn Research Center to serve Cheyney and Lincoln Universities. The goals for this activity were to introduce Cheyney and Lincoln science and preservice faculty members to resources available from the NASA SMD Education Support Network—featuring the Sun-Earth Connection educator kit in particular. SECEF representatives from the Sun-Earth Connection Forum at GSFC, the NASA Aerospace Education Specialist (AESP) representative for Pennsylvania, and the director of the Pennsylvania Space Grant Coalition were brought together to support professional development activities for the Cheyney and Lincoln University faculty. The Franklin Institute chief astronomer, Derrick Pitts, served as host and program lead for this event.

Lead: Dr. William Mackie, NASA Glenn Research Center, Cleveland, OH 44135.

Contact: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.
E-mail: lruberg@cet.edu. Phone: 304-243-2480.

Primary URL: <http://teachspacescience.stsci.edu/cgi-bin/ssrtop.plex>

Secondary

URL: <http://sunearth.gsfc.nasa.gov/>

Scientist(s): Dr. Joseph Busche Wheeling Jesuit University Wheeling, WV

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Mar 05	20 Mar 05	Schrader Environmental Education Center - Wheeling, WV	18	34003	0

A162. Teacher Courses in Master of Science Teaching Program

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: Immersive Earth[B18], MI Initiative[B27], IMAGE[B75], Cluster II[B81], MMS[B86]

Description: Full-semester science content courses are offered for teachers, both in the master of science teaching degree program and for other teachers for enrichment. Four courses (one per semester over a 2-year rotation) are offered in the evenings. Each course has support from various NASA missions, and Rice University has generously offered a 75-percent discount in tuition costs. These courses, coupled with other courses on campus, can be combined to create a master of science teaching degree. The courses offered are Astronomy 402: "Teaching Earth and Space Science," Astronomy 403: "Astronomy for Teachers," Astronomy 430: "Teaching Astronomy Lab," and Physics 401: "Physics of Ham Radio" (includes Sun-Earth Connection topics).

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

Primary URL: <http://space.rice.edu/MST/>

Scientist(s): Dr. Penny Morris-Smith University of Houston-Downtown Houston, TX
Dr. Patricia Reiff Rice University Houston, TX

Partner(s): Houston Museum of Natural Science Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Jan 05	28 Apr 05	Rice University—Houston, TX	4	0	0
16 Jan 05	28 Apr 05	Rice University—Houston, TX	7	0	0
16 Aug 05	28 Sep 05	Rice University—Houston, TX	8	0	0

A163. Tennessee Earth System Science Education Alliance (ESSEA): 9–12 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	University of Tennessee at Martin—Martin, TN	3	0	0

A164. Texas School for the Blind and Visually Impaired (TSBVI) Educator Training

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: GRACE[B4]

Description: Visually impaired students at the Texas School for the Blind and Visually Impaired (TSBVI) and their teachers participated in space science activities to expand their comprehension of space exploration and research. Tactile activities were developed for educator use during the class after being tested during a summer special program for students. Educators were trained in a wide variety of space topics with easily adaptable methods to ensure that space exploration is available to all citizens. Science-in-a-box kits were compiled, and books such as NASA's Touch the Universe and Touch the Stars were made available through the TSBVI library.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu/spacevision>

Partner(s): Texas Cooperative Extension College Station, TX
Texas State School for the Blind Austin, TX

A165. Toledo Earth System Science Education Alliance (ESSEA): 5–8 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jan 05	15 May 05	University of Toledo—Toledo, OH	4	0	0

A166. Wisconsin Earth and Space Science Network

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: DePaul B/F[B37]

Description: This joint effort of the Wisconsin Department of Public Instruction, the Wisconsin Science Network, the University of Wisconsin-Fox Valley, and the DePaul Broker/Facilitator is designed to develop a self-sustaining network of Earth and space science resources for Wisconsin science educators.

Contact: Ms. Tamra Gentry, DePaul University, Chicago, IL 60604. E-mail: tgentry@depaul.edu. Phone: 773-325-4516.

Partner(s): University of Wisconsin-Fox Valley Menasha, WI
Wisconsin Department of Public Instruction Madison, WI
Wisconsin Science Network DeForest, WI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Nov 04	13 Nov 04	Wisconsin Earth and Space Science Initiative Planning Conference—Menasha, WI	48	4	0

A167. Wright State Earth System Science Education Alliance (ESSEA): 5–8 Online Course

Theme(s): Earth Science

Msn/Prgm: ESSEA[B12]

Description: ESSEA is a professional development program for K–12 teachers. Participating universities, colleges, and science education organizations offer Earth system science online graduate courses to inservice and pre-service educators. The courses use an innovative instructional design model; are delivered over the Internet; and feature student-centered, knowledge-building virtual communities. Each 16-week course is led by a master teacher and/or Earth system scientist. These moderators serve as guides and mentors to the participants.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, Arlington, VA 22209.
E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	31 Dec 04	Wright State University—Dayton, OH	13	0	0
15 Jan 05	15 May 05	Wright State University—Dayton, OH	14	0	0

Curricular Support Resources

A168. 3D-VIEW

Theme(s): Earth Science

Msn/Prgm: 3D-VIEW[B25]

Description: Project 3D-VIEW is a classroom program for grades 5 and 6 in which a number of three-dimensional (3-D) technologies are formally introduced into the classroom as teachers are trained and students become land (lithosphere), water (hydrosphere), air (atmosphere) and life (biosphere) experts before performing an Earth systems unit. In the Earth systems unit, students learn how systems interact and how humanity affects these systems. The 3-D technologies, which include VRML objects with viewers, 3-D hard copy, and 3-D animations, combined with the applications that are embedded in formal classroom activities, are designed to enhance the students' understanding of the science content. Activities include computer and science lab exercises as well as missions and scenarios to help students feel immersed in places they are exploring. These 3D-VIEWS provide them with the environments in which they can make observations and decisions as they apply learned science content. There is a formal literacy and mathematics component in each unit. Five books, approximately 48 pages each, along with mathematics lessons, are designed to leverage the exciting 3-D science content and will help students demonstrate proficiency at the grade 6 level in literacy and mathematics. Advanced material in literacy and math is produced at a higher middle school level. Three pilot schools are working with the U.S. Satellite Laboratory and Stanford University's School of Education before the material will be introduced to inner-city schools and, ultimately, to 1, 200 teachers nationwide in online and onsite training. Professional development is a cornerstone of Project 3D-VIEW. Pilot schools are equipped with the immersive VIEW-Wall, which is a dual projection system with content in 3-D stereo in a classroom. Additional collaborators include the North Dakota Association of Tribal Colleges and the University of Hawaii at Hilo, who contributed Native American and Native Hawaiian content for the literacy components.

Lead: Mr. Glen Schuster, U.S. Satellite Laboratory, Rye, NY 10580. E-mail: gschuster@us-satellite.net.

Phone: 914-921-5920.

Primary URL: <http://www.3dview.org>

A169. 3D-VIEW: Formal Research/Evaluation

Theme(s): Earth Science

Msn/Prgm: 3D-VIEW[B25]

Description: Research in Stanford's School of Education is being performed by graduate students and led by the Chief Technology Officer, Dr. Paul Kim. Initial activity has led to a preliminary paper accepted for presentation at the American Educational Research Association (AERA) in April 2006; its title is Effects of 3D Virtual Reality of Plate Tectonics on 5th Grade Students' Achievement and Attitude Toward Science.

Lead: Mr. Glen Schuster, U.S. Satellite Laboratory, Rye, NY 10580. E-mail: gschuster@us-satellite.net.

Phone: 914-921-5920.

Partner(s): Stanford University

Stanford, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Jan 05	30 Sep 05	Ann Street School—Newark, NJ	28	0	0

A170. Astronomy and Space Science Concept Assessment Project

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SEU[B35]

Description: The Universe Forum has worked with scientists and educational researchers at the Harvard-Smithsonian Center for Astrophysics to research, develop, administer, and validate a comprehensive set of distractor-driven multiple-choice assessment items linked to the K–12 astronomy and space science content in the National Research Council's (NRC) "National Science Education Standards" and the "Benchmarks for Science Literacy" from the American Association for the Advancement of Science (AAAS). These items are also linked to the research literature documenting misconceptions concerning science concepts. As of September 2005, we have developed, field-tested, analyzed, and profiled items for all the K–12 Earth science standards that relate to astronomy and space science. Nearly 10, 000 students from 125 schools in 33 States have participated in this project. The results of this work have been reported at NSTA, the September 2005 Astronomical Society of the Pacific (ASP) conference, and other educational conferences. Articles reporting on the work are in preparation. Tests constructed from subsets of these items can be used as a preliminary diagnostic instrument or as a pre-test/posttest to look for any conceptual shift(s) as a result of professional development activities or coursework.

Lead: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

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Scientist(s): Ms. Cathleen Clemens

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Dr. Paul Green

Harvard-Smithsonian Center for Astrophysics

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Dr. F. Rick Harnden, Jr.	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Matthew Holmann	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Almus Kenter	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Ralph Kraft	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. E. Samuel Palmer	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Irene Porro	Massachusetts Institute of Technology	Cambridge, MA
Dr. Marc Schwartz	McGill University	Montreal, Canada
Dr. Frederick Seward	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Patrick Slane	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Randall Smith	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Tim Spahr	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Henry Wadzinski	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Bruce Ward	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Charles Whitney	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
20 Oct 04	20 Jun 05	Barnett Junior High School—Arlington, TX	116	0	0
20 Oct 04	20 Jun 05	Beacon Hill School—Hollywood, FL	46	0	0
20 Oct 04	20 Jun 05	Benzonia Central Senior High School—Benzonia, MI	176	0	0
20 Oct 04	20 Jun 05	Bexley Middle School—Columbus, OH	111	0	0
20 Oct 04	20 Jun 05	Bogalusa Junior High School—Bogalusa, LA	101	0	0
20 Oct 04	20 Jun 05	Boiling Springs High School—Boiling Springs, PA	111	0	0
20 Oct 04	20 Jun 05	Boyertown High School—East—Gilbertsville, PA	51	0	0
20 Oct 04	20 Jun 05	Brady Middle School—Brady, TX	111	0	0
20 Oct 04	20 Jun 05	Broadway High School—Broadway, VA	48	0	0
20 Oct 04	20 Jun 05	Bullard Middle School—Bullard, TX	126	0	0
20 Oct 04	20 Jun 05	Caddo Parish Magnet Middle School—Shreveport—LA	151	0	0
20 Oct 04	20 Jun 05	Calais High School—Calais, ME	16	0	0
20 Oct 04	20 Jun 05	Cannelton High School—Cannelton, IN	21	0	0
20 Oct 04	20 Jun 05	Canton High School—Canton, PA	27	0	0
20 Oct 04	20 Jun 05	Carlynton Senior High School—Carnegie, PA	126	0	0
20 Oct 04	20 Jun 05	Cazenovia High School—Cazenovia, NY	91	0	0
20 Oct 04	20 Jun 05	Cedarville Middle School—Cedarville, AR	76	0	0
20 Oct 04	20 Jun 05	Chaffin Junior High School—Fort Smith, AR	125	0	0
20 Oct 04	20 Jun 05	Charleroi High School—Charleroi, PA	76	0	0
20 Oct 04	20 Jun 05	Churchill Junior High School—East Brunswick—NJ	131	0	0
20 Oct 04	20 Jun 05	Cloquet Middle School—Cloquet, MN	61	0	0
20 Oct 04	20 Jun 05	Clyde High School—Clyde, OH	151	0	0
20 Oct 04	20 Jun 05	Corporate Landing Middle School—Virginia Beach, VA	61	0	0
20 Oct 04	20 Jun 05	Coweta Junior High School—Coweta, OK	121	0	0
20 Oct 04	20 Jun 05	Des Lacs Burlington High School—Des Lacs, ND	16	0	0
20 Oct 04	20 Jun 05	Discovery Middle School—Fargo, ND	126	0	0
20 Oct 04	20 Jun 05	Duncan U. Fletcher Middle School—Jacksonville Beach, FL	101	0	0
20 Oct 04	20 Jun 05	Earl Warren Middle School—Solana Beach, CA	141	0	0
20 Oct 04	20 Jun 05	East Aurora High School—East Aurora, NY	126	0	0
20 Oct 04	20 Jun 05	East Valley Middle School—Nampa, ID	161	0	0
20 Oct 04	20 Jun 05	Fair Grove Middle School—Fair Grove, MO	152	0	0
20 Oct 04	20 Jun 05	Falls City Middle School—Falls City, NE	81	0	0
20 Oct 04	20 Jun 05	Ferndale Middle School—Ferndale, MI	59	0	0
20 Oct 04	20 Jun 05	Fort Campbell High School—Fort Campbell, KY	111	0	0
20 Oct 04	20 Jun 05	Frazier High School—Perryopolis, PA	141	0	0
20 Oct 04	20 Jun 05	Freeport High School—Freeport, IL	9	0	0
20 Oct 04	20 Jun 05	Gonzales High School—Gonzales, TX	6	0	0
20 Oct 04	20 Jun 05	Grand Haven Senior High School—Grand Haven, MI	126	0	0
20 Oct 04	20 Jun 05	Greater Latrobe Senior High School—Latrobe, PA	231	0	0
20 Oct 04	20 Jun 05	Greeley Central High School—Greeley, CO	91	0	0
20 Oct 04	20 Jun 05	Hardin Middle School—Saint Charles, MO	241	0	0
20 Oct 04	20 Jun 05	Harper College—Palatine, IL	62	0	0
20 Oct 04	20 Jun 05	Harriton High School—Rosemont, PA	31	0	0

20 Oct 04	20 Jun 05	Hastings High School—Hastings, MI	77	0	0
20 Oct 04	20 Jun 05	Henry B. White Horne Middle School— Verona, NJ	31	0	0
20 Oct 04	20 Jun 05	Hudson Bend Middle School—Austin, TX	91	0	0
20 Oct 04	20 Jun 05	Independence High School—Independence, OH	121	0	0
20 Oct 04	20 Jun 05	Indio High School—Indio, CA	161	0	0
20 Oct 04	20 Jun 05	Jefferson High School—Jefferson, TX	14	0	0
20 Oct 04	20 Jun 05	Jefferson High School Planetarium— Lafayette, IN	151	0	0
20 Oct 04	20 Jun 05	Jim Thorpe High School—Jim Thorpe, PA	106	0	0
20 Oct 04	20 Jun 05	K.S. Hauge Alternative Education Center— Junction City, KS	41	0	0
20 Oct 04	20 Jun 05	Kalispell Junior High School—Kalispell, MT	151	0	0
20 Oct 04	20 Jun 05	Kendall Senior High School—Kendall, NY	66	0	0
20 Oct 04	20 Jun 05	Kennebunk High School—Kennebunk, ME	101	0	0
20 Oct 04	20 Jun 05	Lamar Middle School—Austin, TX	156	0	0
20 Oct 04	20 Jun 05	Lewisville High School—Lewisville, TX	131	0	0
20 Oct 04	20 Jun 05	Lincoln Middle School—El Paso, TX	146	0	0
20 Oct 04	20 Jun 05	Lombard Middle School—Galesburg, IL	92	0	0
20 Oct 04	20 Jun 05	Longwood Middle School—Middle Island, NY	71	0	0
20 Oct 04	20 Jun 05	Maine School of Math and Science— Limestone, ME	121	0	0
20 Oct 04	20 Jun 05	Mount Eden Middle School—Flagstaff, AZ	56	0	0
20 Oct 04	20 Jun 05	Mount Washington Middle School— Mount Washington, KY	121	0	0
20 Oct 04	20 Jun 05	North High School—Hagerstown, MD	81	0	0
20 Oct 04	20 Jun 05	Oak Hills High School—Cincinnati, OH	181	0	0
20 Oct 04	20 Jun 05	Odessa Middle School—Odessa, MO	136	0	0
20 Oct 04	20 Jun 05	Ohio University—Athens, OH	299	0	0
20 Oct 04	20 Jun 05	Paragould High School—Paragould, AR	81	0	0
20 Oct 04	20 Jun 05	Parish Hill Senior High School—Chaplin, CT	56	0	0
20 Oct 04	20 Jun 05	Parkway Middle School—Willshire, OH	71	0	0
20 Oct 04	20 Jun 05	Paso Robles High School—Paso Robles, CA	51	0	0
20 Oct 04	20 Jun 05	Perry High School—Massillon, OH	15	0	0
20 Oct 04	20 Jun 05	Pius XI High School—Milwaukee, WI	91	0	0
20 Oct 04	20 Jun 05	Plymouth South Middle School— Plymouth, MA	126	0	0
20 Oct 04	20 Jun 05	Post Falls Middle School—Post Falls, ID	136	0	0
20 Oct 04	20 Jun 05	Prairie River Middle School—Merrill, WI	144	0	0
20 Oct 04	20 Jun 05	Putnam High School—Putnam, CT	91	0	0
20 Oct 04	20 Jun 05	Ray D. Molo Middle School—Lake Charles, LA	46	0	0
20 Oct 04	20 Jun 05	River City Middle School—Post Falls, ID	141	0	0
20 Oct 04	20 Jun 05	Rose Hill Junior High School—Redmond, WA	16	0	0
20 Oct 04	20 Jun 05	Sauk Prairie High School—Prairie du Sac, WI	24	0	0
20 Oct 04	20 Jun 05	Shakamak Senior High School—Jasonville, IN	56	0	0
20 Oct 04	20 Jun 05	Shaker Heights Middle School— Shaker Heights, OH	61	0	0
20 Oct 04	20 Jun 05	Sonora Junior High School—Sonora, TX	81	0	0
20 Oct 04	20 Jun 05	Souers Middle School—Canton, OH	111	0	0
20 Oct 04	20 Jun 05	St. Francis High School—Louisville, KY	46	0	0
20 Oct 04	20 Jun 05	St. Paul's School—Concord, NH	23	0	0
20 Oct 04	20 Jun 05	Starpoint Middle School—Lockport, NY	251	0	0
20 Oct 04	20 Jun 05	Stoneman Douglas High School—Parkland, FL	166	0	0
20 Oct 04	20 Jun 05	Sunny Vale Middle School—Blue Springs, MO	141	0	0
20 Oct 04	20 Jun 05	Sunridge Middle School—Pendleton, OR	101	0	0
20 Oct 04	20 Jun 05	Tipton High School—Tipton, IN	168	0	0
20 Oct 04	20 Jun 05	Towson University—Towson, MD	38	0	0
20 Oct 04	20 Jun 05	Union County High School—Liberty, IN	51	0	0
20 Oct 04	20 Jun 05	University of Wisconsin-Parkside—Kenosha, WI	112	0	0
20 Oct 04	20 Jun 05	Villa Maria Academy—Erie, PA	200	0	0
20 Oct 04	20 Jun 05	W.S. Permenter Middle School—Cedar Hill, TX	141	0	0
20 Oct 04	20 Jun 05	Waubonsie Valley High School—Aurora, IL	51	0	0
20 Oct 04	20 Jun 05	Waunakee High School—Waunakee, WI	101	0	0
20 Oct 04	20 Jun 05	Wayzata East Middle School—Plymouth, MN	251	0	0
20 Oct 04	20 Jun 05	Weir High School—Weirton, WV	56	0	0
20 Oct 04	20 Jun 05	West Branch High School—Morrisdale, PA	12	0	0
20 Oct 04	20 Jun 05	West Memorial Junior High School—Katy, TX	146	0	0
20 Oct 04	20 Jun 05	Westbrook High School—Westbrook, CT	81	0	0
20 Oct 04	20 Jun 05	Wood Oaks Junior High School—Northbrook, IL	76	0	0

Description: A Multi-Wavelength Braille Book Featuring Tactile NASA Images combines Braille, large-type print, and tactile images so that visually impaired people can feel the images of astronomical objects observed in several different wavelengths. They will perceive the universe from an entirely new perspective. This book will present objects in the universe that are hidden to our eyes. The project team began by analyzing imagery and developing a story line that unlocks the secrets of the universe. Doris Daou and Noreen Grice carefully selected each image so that the essential message could be interpreted from the electromagnetic spectrum into a tactile form. The images were collected from different sources. Images of objects observed in the infrared wavelength

were collected from the Spitzer and 2MASS archives from the Infrared Processing and Analysis Center. The x-ray images were collected from the Chandra X-ray Observatory's archives. The visible images were collected from the Hubble Space Telescope's archive. Finally, radio and ultraviolet images were collected from various available sources. The scientific content was reviewed by the Spitzer Science Center Education and Public Outreach Office. The text and prototype tactile images underwent rigorous editorial and educational review by Ben Wentworth with his students at the Colorado School for the Blind.

Lead: Ms. Doris Daou, California Institute of Technology (Caltech), Pasadena, CA 91125.
E-mail: daou@ipac.caltech.edu. Phone: 626-395-8668.
Contact: Dr. Mark Lacy, Spitzer Science Center/California Institute of Technology, Pasadena, CA 91125.
E-mail: mlacy@ipac.caltech.edu.
Partner(s): You Can Do Astronomy LLC New Britain, CT

A175. Chandra E/PO Grant: Does Dark Matter Really Exist? Observational Benchmarks for the Next Generation

Theme(s): Astrophysics
Msn/Prgm: CXO[B44]
Description: We are creating animations that can be used by astronomy instructors to develop the ideas behind "dark matter" and why we think that something that we cannot see is real. We will develop a series of pedagogical animations that will assist museum personnel, educators, and media product developers in explaining the evidence for dark matter. The animations will be produced by a collaboration between the PI science team and the Science Media Group in the Science Education Department of the Center for Astrophysics. The final products will be made available in a number of resolutions, including broadcast-quality downloads and formats for DVD, CD-ROM, and Internet. Products will be placed in the Einstein Centennial repository to be maintained by NASA's Universe Forum as a communitywide resource.

Lead: Dr. Megan Donahue, Michigan State University, East Lansing, MI 48824-1324.
E-mail: donahue@pa.msu.edu. Phone: 517-355-9200.
Partner(s): Harvard-Smithsonian Center for Astrophysics Cambridge, MA
University of Michigan Ann Arbor, MI

A176. Chandra E/PO Grant: The Sun-Earth Connection

Theme(s): Heliophysics, Astrophysics
Msn/Prgm: CXO[B44]
Description: These third-grade, hands-on/minds-on activities center on the Sun as the primary source of energy for Earth and its role in plant development. Students begin by building simple solar-powered motors and investigating how distance from a light source changes the amount of energy that is received. They will build a scale model of the solar system. Using their model, they will estimate the relative amounts of solar energy received by surfaces of different planets to understand why different planets have different surface temperatures. Students will investigate which parts of a plant's life cycle and which plant structures require sunlight. They will explore what nutrients are needed for plant growth and development by growing plants in different media—air, water, sand, and rich soil. They will grow plants under different lighting conditions using colored filters and limiting hours of sunlight to investigate energy requirements for plant growth. The planned investigations will reveal and address many common student misconceptions (e.g., plants convert soil into plant material). Students will further explore how all animal life depends on plants and how all plants depend on the Sun. Students will explore plant diversity, focusing on how plants adapt to extreme climates. They will also explore how plants change the environment in which they grow. Students will learn about the environment in space and on other planets and will design plants that might live under those conditions. They will learn about plant-growing experiments that have been done on the Shuttle and those that are ongoing on the International Space Station to see how weightlessness affects plant growth. Using their investigations of simple solar-powered devices, along with information about how Chandra obtains power from solar panels and what plants need in order to grow, they will design a space journey to a more distant, undiscovered planet.

Lead: Dr. Christine Jones, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: cjones@cfa.harvard.edu.
Scientist(s): Dr. Christine Jones Harvard-Smithsonian Center for Astrophysics Cambridge, MA
Ms. Nadine Solomon Hardy Public School Arlington, MA
Partner(s): Arlington Public Schools Arlington, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Dec 04	05 May 05	Arlington Public Schools—Arlington, MA	378	0	0

A177. Charged Particle Motion in Earth's Magnetosphere

Theme(s): Heliophysics
Subject(s): Earth Science, Physical Science, Space Science
Format(s): Web Site
Grade(s): Grades 10–12, Higher Education
Msn/Prgm: LWS/PO[B90]
Description: A series of descriptive, Web-based animations, explanations, and physics problems provide an online educational resource exploring the motion of particles in a magnetic field. The context for this Windows to the Universe-based "Explorateur" is the impact of space weather on Earth's magnetosphere and the aurora. Animations and content are adapted for use in high school physics courses from the Cooperative Program for

Operational Meteorology, Education and Training (COMET) program's Aurora Module, originally developed for college undergraduates. Basic physics concepts are enriched through links to many related subjects found on the Windows to the Universe Web site.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000988&mode=full>

A178. Connecting the Sun, Earth, Sunspots, and Climate

Theme(s): Heliophysics
Subject(s): Earth Science, Physical Science
Format(s): Web Site
Grade(s): Grades 6–8
Msn/Prgm: LWS/PO[B90]
Description: Four interrelated lesson plans explore the dynamic nature of the Sun, magnetic fields of Earth, magnetic characteristics of sunspots, and temporal correlations between sunspot activity and Earth's past climate. Scientists and teachers who are preparing classroom activities for grade 5–8 students can use these lessons to enhance understanding about the connections between the Sun and Earth, and sunspots and climate. These four lessons compose the Sun-Earth Connection unit of a Teacher's Guide to the National Center for Atmospheric Research (NCAR) Climate Discovery Exhibit. They may be used independently or as a complement to a middle school science class field trip to NCAR's Mesa Laboratory in Boulder, CO. These resources are accompanied by a set of PowerPoint slides annotated by NCAR scientists to explain the technology used and the features seen in solar images contributed by the scientists and their collaborators who conduct research with support from NASA.
Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000990&mode=full>

A179. CRISM: Curriculum Guide

Theme(s): Planetary
Subject(s): Space Science
Format(s): Web Site
Grade(s): Grades 6–8
Msn/Prgm: MRO[B102]
Description: How do scientists look for signs of water on Mars? How similar are Martian geological features to what we see on Earth? The hands-on activities in our comprehensive curriculum guide will take students and teachers alike into the incredible world of Mars exploration. A PDF file is available on the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) Web site.
Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://crism.jhuapl.edu/education.html>

A180. CRISM: Cut-Out Paper Model

Theme(s): Planetary
Subject(s): Space Science
Format(s): Web Site
Grade(s): Grades 6–8
Msn/Prgm: MRO[B102]
Description: A miniature, 3-D paper version of the CRISM instrument that will lead the search for past water on Mars is available on the CRISM Web site.
Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://crism.jhuapl.edu/education.html>

A181. CRISM: Fact Sheet

Theme(s): Planetary
Subject(s): Space Science
Format(s): Pamphlet
Grade(s): Grades 6–8, General Public
Msn/Prgm: MRO[B102]

Description: The CRISM fact sheet provides an overview of the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) instrument on the Mars Reconnaissance Orbiter (MRO) mission. The fact sheet covers the instrument's science capabilities and specifications, as well as a labeled drawing of the unit.

Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://crism.jhuapl.edu/education.html>

A182. CRISM: Web Site

Theme(s): Planetary
Subject(s): Space Science
Format(s): Web Site
Grade(s): Grades 6–8, General Public
Msn/Prgm: MRO[B102]
Description: The CRISM Web site provides an overview of the instrument's science objectives on MRO, instrument development, and education and outreach page, including quick facts, a downloadable fact sheet, curriculum guide, instrument cutout model, lesson plans, and links to related sites.

Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://crism.jhuapl.edu/>

A183. DePaul Broker/Facilitator: "SPACEBUZZ" Electronic Newsletter

Theme(s): Heliophysics, Astrophysics, Planetary
Msn/Prgm: DePaul B/F[B37]
Description: SPACEBUZZ is an e-mail newsletter that was designed to serve as an outreach tool for K–12 science and math teachers in the seven-State DePaul Broker/Facilitator region. It provides brief general information about Earth and space science and about past, present, and upcoming NASA missions. SPACEBUZZ does this in a manner that is easily understandable across most grade levels. It also gives teachers enough information so that they can easily pursue areas of interest on their own for themselves and/or their classrooms.

Lead: Ms. Tamra Gentry, DePaul University, Chicago, IL 60604. E-mail: tgentry@depaul.edu. Phone: 773-325-4516.

Primary URL: <http://spacescience.depaul.edu/spacebuzz/index.asp>

A184. Designing Nature's Way

Theme(s): Heliophysics
Subject(s): Mathematics, Technology, Life Science
Format(s): PDF
Grade(s): Grades 6–8
Msn/Prgm: ST-5[B92]
Description: Engineers and inventors sometimes look to nature for new ideas on how to solve problems. One way a NASA team at Ames Research Center in Silicon Valley, CA, has done this is to emulate not the design, but the very design process of nature. Using what is called artificial evolution, a supercomputer or many microcomputers networked together "evolve" and test millions of generations of designs to finally come up with the best one possible to meet a given set of requirements. The result is often like nothing a human would have ever thought of. This activity article describes how this process was used to create a perfect, tiny antenna for some tiny satellites. A clever game students can play to "evolve" the best computer "emoticon" face to express a given emotion illustrates the concepts of both natural and artificial evolution.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000975&mode=full>

A185. Developing New High School Hands-On and Computer-Based Curricular Modules on the Nature of Comets, Dust in the Solar System, the Kuiper Belt, and the Oort Cloud

Theme(s): Planetary
Msn/Prgm: SRT[B28]
Description: We are developing three curricular modules focused on the nature of comets; dust in the solar system; the Kuiper Belt and Oort Cloud; and comparisons between planetary bodies, comets, asteroids, and Kuiper Belt Objects (KBOs). Each module is composed of both hands-on activities and computer-based animations within a well-defined, standards-based curricular context. The project utilizes data and E/PO products generated from Comet Borrelly during the Deep Space 1 mission. The use of data from Comet Borrelly will allow us to develop programming that encompasses the authentic research-based experiences that teachers say they need. We propose this project in partnership with the Colorado MESA program, a statewide after-school program that targets low-income and underrepresented students. We are currently working with teachers and advisers for after-school programs to develop the first of the modules on light curves. The module focuses on

Comet Borelly's movement along its orbital path. At each location along the orbit, data are provided showing the observed and heliocentric magnitudes. When plotted, the data are used to demonstrate that (1) comets get fainter as they move away from the Sun, and activity levels change, (2) an asymmetry exists between the pre-perihelion and post-perihelion magnitudes, and, (3) nonuniform bodies will have a light curve that varies over a rotation period. The second module is in the planning stages. Its focus is the comparison of comets with planetary bodies, asteroids, and KBOs. This module allows students to explore characteristics that vary between different categories of solar system objects, including solar wind interactions, level of outgassing, composition, and orbital parameters. Emphasis is placed on the concept of the evolution of planetary objects in our solar system.

Lead: Dr. Francis Bagenal, University of Colorado, Boulder, CO 80309.
E-mail: bagenal@colorado.edu. Phone: 303-492-2598.

A186. Development of GEMS Space Science Core Sequence Curriculum

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ASO[B33], SSE[B34], SECEF[B36], HST[B49], Kepler[B50], SST[B52], Navigator Program[B59], NAI[B62]

Description: The Lawrence Hall of Science (LHS) is creating a series of units for formal education entitled "Space Science Core Sequence" (SSCS). Great Explorations in Math and Science (GEMS) is an LHS project that develops teacher guides for doing classroom activities featuring an inquiry-based approach to science education. This SSCS product will have two series of units, one series for grades 3-6 and another for grades 6-8. The units are designed to meet the essential needs of elementary and middle school teachers in terms of requirements for science education standards.

Lead: Mr. Alan Gould, Lawrence Hall of Science, Berkeley, CA 94720-5200. E-mail: agould@uclink4.berkeley.edu.
Phone: 510-643-5082.

Primary URL: <http://lhs.berkeley.edu/gems>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Feb 05	01 Jun 05	Amerischools Academy—Yuma, AZ	31	0	0
01 Feb 05	01 Jun 05	Armand Bayou Elementary School— Houston, TX	31	0	0
01 Feb 05	01 Jun 05	Art Freiler Elementary School—Tracy, CA	31	0	0
01 Feb 05	01 Jun 05	Bella Vista Elementary School—Bella Vista, CA	31	0	0
01 Feb 05	01 Jun 05	C.E. Hannah Elementary School— Hobson City, AL	31	0	0
01 Feb 05	01 Jun 05	Capps Middle School—Heber, AZ	31	0	0
01 Feb 05	01 Jun 05	Chinese American International School— San Francisco, CA	31	0	0
01 Feb 05	01 Jun 05	Clara E. Westropp Elementary School— Cleveland, OH	31	0	0
01 Feb 05	01 Jun 05	Dingeman Elementary School— San Diego, CA	33	0	0
01 Feb 05	01 Jun 05	Dr. Martin Luther King Academy—Salinas, CA	31	0	0
01 Feb 05	01 Jun 05	Durham Elementary School—Tigard, OR	31	0	0
01 Feb 05	01 Jun 05	Fredonia Elementary School—Fredonia, NY	31	0	0
01 Feb 05	01 Jun 05	Greenfield Elementary School—Phoenix, AZ	62	0	0
01 Feb 05	01 Jun 05	James F. Bay Elementary School—Seabrook, TX	31	0	0
01 Feb 05	01 Jun 05	Jefferson Elementary School—Medford, OR	31	0	0
01 Feb 05	01 Jun 05	John Caboto School—Montreal, Canada	31	0	0
01 Feb 05	01 Jun 05	Kamehameha Elementary School, East Hawai'i— Kea'au, HI	31	0	0
01 Feb 05	01 Jun 05	Letchworth Central School—Gainesville, NY	31	0	0
01 Feb 05	01 Jun 05	New Waverly Intermediate School— New Waverly, TX	31	0	0
01 Feb 05	01 Jun 05	Newcastle Independent School District— Newcastle, TX	31	0	0
01 Feb 05	01 Jun 05	Palominas District, Coronado Elementary School— Hereford—AZ	31	0	0
01 Feb 05	01 Jun 05	Rankin Elementary School—Arlington, TX	31	0	0
01 Feb 05	01 Jun 05	Robert C. Lindsey Elementary School— Chesterland—OH	31	0	0
01 Feb 05	01 Jun 05	St. Philip's School—Bemidji, MN	31	0	0
01 Feb 05	01 Jun 05	Stony Creek Elementary School—Denver, CO	31	0	0
01 Feb 05	01 Jun 05	Truckee Elementary School—Truckee, CA	31	0	0
01 Feb 05	01 Jun 05	Wilmot Elementary School—Deerfield, IL	31	0	0
01 Feb 05	01 Jun 05	Woodville Elementary School—Tallahassee, FL	31	0	0

A187. Do Killer Electrons Affect You?

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Pamphlet
 Grade(s): Grades 5–8, Community College, General Public
 Msn/Prgm: Polar[B82]
 Description: This full-color trifold brochure created for curriculum support answers questions about high-energy particles in space: how they are produced, when and where they are, and how they can affect us. It lists Web and print resources for further study. The brochure is the third in a series, after What Causes the Northern Lights? and What Causes Storms from the Sun?
 Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

A188. Earth's Atmosphere Understood Through Graph Reading

Theme(s): Heliophysics
 Subject(s): Earth Science, Mathematics
 Format(s): Web Site
 Grade(s): Grades 8–10
 Msn/Prgm: LWS/PO[B90]
 Description: A series of online lesson plans helps students in grades 8-10 to enhance their graph-reading skills while learning about the structure and composition of Earth's atmospheric layers. Interactive graphics and content adapted from the COMET program's Aurora Module focuses students on creating graphs, understanding and using the logarithmic scale, and interpreting data about the atmosphere's temperature profile and the distribution of a variety of chemical species throughout the troposphere, mesosphere, and ionosphere. These resources are presented on the Windows in the Universe Web site as an "Exploratur," where lessons and student worksheets may be downloaded for classroom use. The site also provides related background information about Earth's atmosphere and the solar energy that impinges upon it.
 Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000989&mode=full>

A189. Educational Family Guides to the Sun and Mars

Theme(s): Heliophysics, Planetary
 Subject(s): Space Science
 Format(s): Book
 Grade(s): Grades 6–12
 Msn/Prgm: SSI B/F[B42], LWS/PO[B90]
 Description: Family Guides are innovative collections of original puzzles, pictures, poetry, and projects all designed to stimulate co-learning experiences between children aged 6 to 13 and the caring adults in their lives. The Guides are useful for parents and educators in science centers, planetariums, and after-school programs. They are also of interest to classroom teachers in helping to engage student interest at the start of standards-based lesson plans. The Guide assumes little or no prior knowledge about the Sun or astronomy in general; in fact, it addresses many popular misconceptions. The content of the Family Guide to the Sun develops and reinforces four overall themes: the Sun as a star, the Sun's connection to life on Earth, the Sun's motion in Earth's sky, and the Sun's 11-year cycle of activity. The content of the Family Guide to Mars develops and reinforces four overall themes: comparing Earth and Mars as planets, the importance of water to life as we know it, the technology of Mars exploration, and seeing Mars in Earth's sky.
 Lead: Dr. Cherilynn Morrow, Space Science Institute, Boulder, CO 80301. E-mail: camorrow@colorado.edu.
 Phone: 720-974-5828.

Primary URL: <http://www.spacescience.org/education/extra/familyguides/index.html>

Scientist(s):	Dr. Todd Clancy	Space Science Institute	Boulder, CO
	Dr. Tony Colaprete	NASA Ames Research Center	Moffett Field, CA
	Dr. Paul Dusenbery	Space Science Institute	Boulder, CO
	Dr. William Farrand	Space Science Institute	Boulder, CO
	Dr. Steve Lee	University of Colorado, Boulder	Boulder, CO
	Dr. Cherilynn Morrow	Space Science Institute	Boulder, CO
	Dr. Brad Sandor	Space Science Institute	Boulder, CO
	Ms. Deborah Scherrer	Stanford University	Stanford, CA
	Dr. Philip Scherrer	Stanford University	Stanford, CA
	Dr. Michael Wolff	Space Science Institute	Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Space Science Institute—Boulder, CO	0	350	0

A190. Electromagnetic Radiation, Astronomy, and SOFIA (for Students with Visual Impairments)

Theme(s): Astrophysics
 Msn/Prgm: SOFIA[B53]

Description: This activity is aimed at students with visual impairment visiting the University of Chicago's Yerkes Observatory in Williams Bay, WI. The activity includes a kinesthetic tour of telescopes, charge-coupled device (CCD) equipment, and observatory functions such as dome and floor motions, as well as the building of light detectors using the active astronomy kits. Students use infrared emitters from TV remote controllers to activate their detectors and sense the detection through the speaker-amplifier in the circuit. Presenters explain that infrared light is invisible to everyone and that the engineers and astronomers working on SOFIA build detectors sensitive to infrared wavelengths of light and then figure out ways to represent the light detected so humans can study and interpret it. Students feel the model of the SOFIA aircraft and the opening of the telescope and discuss doing astronomy aboard an aircraft.

Lead: Ms. Vivian Hoette, Yerkes Observatory, University of Chicago, Williams Bay, WI 53191.

E-mail: vhoette@yerkes.uchicago.edu. Phone: 262-245-5555.

Primary URL: <http://astro.uchicago.edu/yerkes/outreach>

A191. Electronic Newsletter: "Bulletin for Educators in Space Science" ("BESS")

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SSI B/F[B42]

Description: The NASA Education and Public Outreach Broker/Facilitator at the Space Science Institute in Boulder, CO, has a new electronic bulletin called BESS ("Bulletin for Educators in Space Science"). The newsletter will inform participants of opportunities in space and Earth science in the western region (Arizona, California, Colorado, North Dakota, Nebraska, New Mexico, Nevada, South Dakota, and Utah), in addition to those with a national scope that may be of value to educators in these States. BESS is a quarterly newsletter, with occasional special bulletins for time-critical opportunities. The SSI Broker tailors the newsletter to the participants' educational needs in teaching space and Earth science by strongly encouraging participants to provide specific feedback on educational needs, as well as opportunities, in their areas. BESS currently serves over 1,500 educators.

Lead: Ms. Amy Wilkerson, Space Science Institute, Boulder, CO 80301. E-mail: awilkers@colorado.edu. Phone: 720-974-5833.

Primary URL: <http://halvas.spacescience.org/broker/bess/Default.htm>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Dec 04	24 Jun 05	Space Science Institute—Boulder, CO	0	1600	0

A192. "Exceptional Space Science Materials for Exceptional Students" Workshop

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ASO[B33], SSE[B34], SEU[B35], SECEF[B36], DePaul B/F[B37], MARSSB[B39], NESSIE B/F[B40], SERCH B/F[B41], SSI B/F[B42], S2N2 B/F[B43]

Description: The purposes of these workshops are to (1) familiarize developers of NASA Earth and space science education materials with the diversity of exceptional classroom and audience needs, (2) familiarize educators of exceptional students with the wide variety of standards-based space science educational support materials available from NASA, (3) evaluate several popular classroom materials from the different space science themes for use in exceptional education settings, and (4) build a communication and support network of exceptional educators and NASA mission-related personnel. The goals of these workshops are to (1) provide educators of exceptional students with exciting new resources to use in formal and informal settings, as well as some experience in using them, (2) provide recommendations for modifications and future design issues to developers of NASA mission-related educational products so that they are readily usable by exceptional audiences, (3) continue developing a handbook of best practices for use in other workshops and educational settings for members of the NASA Earth and space science Education Support Network and, (4) form the nexus of a network of educators and product developers who will continue to work together to raise awareness of Exceptional Needs educational materials and to be a part of an Extended Advisory Network for NASA missions and NASA's Office of Education. The format of these workshops allows for presenters and participants to share their knowledge and professional experiences through short presentations, interactive activities, and group discussions. Participants are encouraged to simulate a variety of disabilities using visual impairment goggles, hearing impairment simulators, and other materials and devices. Discussions regarding learning disabilities, for example, Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD), are held throughout the workshop.

Lead: Dr. Cassandra Runyon, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.

E-mail: runyonc@cofc.edu. Phone: 843-953-8279.

Contact: Ms. Kathryn Guimond, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.

E-mail: serch@cofc.edu. Phone: 888-873-9475.

Primary URL: <http://serch.cofc.edu/special/workshops.htm>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
24 Jul 05	28 Jul 05	U.S. Space and Rocket Center—Huntsville, AL	26	0	0

A193. Exploring Magnetism in Solar Flares

Theme(s): Heliophysics

Subject(s): Mathematics, Physical Science, Space Science

Format(s): Book, PDF, Web Site

Grade(s): Grades 8–12, Community College

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74]

Description: Exploring Magnetism in Solar Flares is a supplemental curriculum guide for grades 8-14. It is part of a series of guides developed at the University of California, Berkeley, highlighting the importance of magnetism in Earth and space sciences. It contains four activities for exploring solar flares while addressing science, math, and literacy standards.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000964&mode=full>

A194. "Exploring the Planets: A Tour of Other Worlds"

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: "Exploring the Planets: A Tour of Other Worlds" provided an opportunity for an underrepresented and underserved middle school student population to learn about planets, including Earth, the exploration of space, and career opportunities in the planetary and space sciences through a series of four 1.5-hour interactive videoconferences. These videoconferences were telecast from the television studio at the NASA Langley Research Center to students and teachers in six geographically diverse States (Virginia, Maryland, North Carolina, Ohio, Texas, and California) selected by our project partner, the National Alliance of Black School Educators (NABSE). The teleconferences incorporated inquiry-based learning. Students had the unique opportunity of interacting with a scientist involved in planetary exploration. A teacher's activity guide based on the teleconferences is in preparation.

Lead: Dr. Joel Levine, NASA Langley Research Center, Hampton, VA 23681. E-mail: joel.s.levine@nasa.gov.
Phone: 757-864-5692.

Partner(s): National Alliance of Black School Educators (NABSE)

Washington, DC

A195. Fast Auroral SnapshoT (FAST): Curriculum Development, Dissemination, and Public Outreach

Theme(s): Heliophysics

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74]

Description: The FAST Explorer was launched into orbit in August 1996. The instruments aboard FAST measure charged particles that enter Earth's upper atmosphere. Large waves of these particles from the Sun begin to glow once inside Earth's atmosphere, causing a spectacular light show known as the aurora borealis, or northern lights. The education and public outreach for FAST includes K-12 curriculum components such as lessons, activities, and information that will help teachers and students understand the sounding rockets, as well as the aurorae and the satellites that study them.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Contact: Dr. Laura Peticolas, University of California, Berkeley, Berkeley, CA 94720. E-mail: laura@ssl.berkeley.edu.
Phone: 510-643-7273.

Primary URL: <http://www.lawrencehallofscience.org/PASS/AST213&313.html>

Secondary URL:

<http://www.lawrencehallofscience.org/PASS/>

Scientist(s): Dr. Bryan Mendez University of California, Berkeley
Dr. Laura Peticolas University of California, Berkeley

Berkeley, CA
Berkeley, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	20	0	0
20 Oct 04	24 Oct 04	Society for the Advancement of Chicanos and Native Americans in Science National Conference 2004—Austin, TX	6	0	0

A196. Gamma-Ray Burst Skymap Web Site

Theme(s): Astrophysics

Subject(s): Space Science

Format(s): Web Site

Grade(s): Grades 6-12, Adult/Continuing Education, Community College, General Public, Higher Education

Msn/Prgm: Swift[B57]

Description: The Gamma-Ray Burst Skymap Web site automatically updates for each gamma-ray burst as it occurs, whether detected by Swift or other orbiting satellites. For each burst, the location on the sky, starmap, constellation, and detecting mission are generated automatically. The record is then quickly updated by hand to include a written Description: of the burst properties and scientific significance as observations continue.

Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000966&mode=full>

A197. GLAST: Mission Sticker

Theme(s): Astrophysics
 Subject(s): Space Science
 Format(s): Web Site
 Grade(s): Grades 9–12, General Public
 Msn/Prgm: GLAST[B47]
 Description: The GLAST sticker features a colorful image of the satellite on the front, along with text describing the mission on the back.
 Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000967&mode=full>

A198. GLAST: Tasty Active Galaxy Activity

Theme(s): Astrophysics
 Subject(s): Space Science
 Format(s): PDF
 Grade(s): Grades 3–8
 Msn/Prgm: GLAST[B47]
 Description: This one-page handout provides a short activity for students to do using food products to model an active galaxy. The goal is to eat the black hole before it eats you!
 Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000968&mode=full>

A199. GRACE: Technology Preparation

Theme(s): Earth Science
 Msn/Prgm: GRACE[B4]
 Description: Underrepresented students from the El Paso community participated in NASA training as part of the TexPrep program. Engineering concepts included GRACE mission data and protein crystals in space. Students enhanced engineering, math, and science knowledge through hands-on activities.
 Contact: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
 Phone: 512-471-6922.
 Primary URL: <http://www.utep.edu/DesktopDefault.aspx>
 Partner(s): University of Texas at El Paso El Paso, TX

A200. Hubble Space Telescope: “Amazing Space”

Theme(s): Astrophysics
 Subject(s): Astronomy
 Format(s): Web Site
 Grade(s): Grades K–12
 Msn/Prgm: HST[B49]
 Description: Amazing Space is an astronomy and space science education program that harnesses the Hubble Space Telescope's (HST) extraordinary ability to deliver stunning imagery and profound scientific discoveries. Amazing Space fuses these spectacular scientific findings into hard-copy and Web-based materials aimed at inspiring and educating the audience about the wonders of the universe. In addition, Amazing Space staff conduct workshops and training sessions for K–14 education professionals on a wide range of topics, including how to integrate HST materials into the classroom, science misconceptions, and cutting-edge science for K–12 students.
 Lead: Ms. Bonnie Eisenhamer, Space Telescope Science Institute, Baltimore, MD 21218.
 E-mail: bonnie@stsci.edu. Phone: 410-338-4798.
 Primary URL: <http://amazing-space.stsci.edu/>
 Scientist(s): Ms. Mary Bishop Space Telescope Science Institute Baltimore, MD
 Ms. Bonnie Eisenhamer Space Telescope Science Institute Baltimore, MD
 Mr. Dan McCallister Space Telescope Science Institute Baltimore, MD
 Mr. John Stoke Space Telescope Science Institute Baltimore, MD
 Dr. Frank Summers Space Telescope Science Institute Baltimore, MD
 Ms. Julie Taylor Desert Trails School Adelanto, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 04	11 Oct 04	Columbia Middle School—Adelanto, CA	12	0	0
21 Oct 04	23 Oct 04	New York State Middle School Annual Conference—Lake Placid, NY	37	0	0
25 Oct 04	27 Oct 04	New York State United Teachers Annual In-Service Conference—Albany, NY	0	60	0

04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	30	0	0
09 Feb 05	09 Feb 05	Maryland Science Center—Baltimore, MD	0	100	0
17 Feb 05	19 Feb 05	NASA/Norfolk State University Pre-Service Teacher Program—Alexandria, VA	25	0	0
16 Mar 05	16 Mar 05	Villa Julie College—Baltimore, MD	21	0	0
17 Mar 05	17 Mar 05	Youth's Benefit Elementary School—Fallston, MD	36	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	300	0	0
16 Apr 05	16 Apr 05	Louisiana Art and Science Museum—Baton Rouge, LA	0	100	0
16 Apr 05	16 Apr 05	Louisiana Art and Science Museum—Baton Rouge, LA	30	0	0
21 Apr 05	21 Apr 05	Maryland Science Center—Baltimore, MD	20	0	0
14 Jul 05	14 Jul 05	NASA Dryden Flight Research Center—Edwards, CA	15	0	0
19 Jul 05	19 Jul 05	Spitz Incorporated—Chadds Ford, PA	0	50	0
22 Jul 05	22 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	50	0	0

A201. IMAGE: An Introduction to Geomagnetism

Theme(s): Heliophysics

Subject(s): Astronomy

Format(s): Web Site

Grade(s): Grades 6–12

Msn/Prgm: IMAGE[B75]

Description: This resource contains an introduction to magnetism and Earth's field. It also provides links to additional IMAGE reading materials and a large and unique collection of classroom activities that help students understand Earth's magnetic field and its changes through time and space.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/magnetism/magnetism.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	0	3000

A202. IMAGE: Exploring Earth's Magnetic Field

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Kit

Grade(s): Grades 2–12

Msn/Prgm: IMAGE[B75]

Description: This is a collection of 23 classroom activities written by teachers and spanning grades 2-12. They explore magnetism in the classroom, the design and operation of a simple magnetometer, and the properties of Earth's magnetosphere. A number of activities rely on Web-based data archives to examine the phenomenon of magnetic storms and how they are correlated with solar activity and auroras.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/magbook.html>

Scientist(s): Dr. Sten Odenwald, NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	0	2000

A203. IMAGE: Northern Lights and Solar Sprites

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Kit

Grade(s): Grades K–6

Msn/Prgm: IMAGE[B75]

Description: Fifty classroom activities have been designed for K–6 students. Topics include magnetism, solar activity, stars, and satellite design. The collection includes innovative hands-on activities related to satellite design, magnetism, and solar storms.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/dimarco.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	2500

A204. IMAGE: Radiation Belts and Trapped Particles

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Web Site

Msn/Prgm: IMAGE[B75], LWS/PO[B90]

Description: Invisible clouds of particles orbit Earth. Scientists study them to protect our astronauts and our expensive satellite assets in space. This resource, designed for students, teachers, and the interested public, describes these invisible, and sometimes deadly, clouds of particles. Among the Web resources are archives of frequently asked questions (FAQs) about the Van Allen Belts and related topics, classroom activities, a multimedia gallery of computer animations of trapped particles, and a detailed illustrated primer about radiation belts.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://radbelts.gsfc.nasa.gov/outreach/outreach.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	12000

A205. IMAGE: Soda Bottle Magnetometer

Theme(s): Heliophysics

Msn/Prgm: IMAGE[B75]

Description: This \$5.00 device measures the local magnetic field of Earth and lets students explore its changes during magnetic storms. Developed by the IMAGE E/PO program in 1997, it has been used in hundreds of classrooms and is a popular hands-on activity in teacher training workshops.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/workbook/page9.html>

Secondary

URL: <http://image.gsfc.nasa.gov/poetry/workbook/magnet.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	21000

A206. IMAGE: Solar Storms and You!

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Booklet

Msn/Prgm: IMAGE[B75]

Description: This is a math-oriented workbook featuring 20 problems related to space weather, including topics related to sunspot cycles, Earth's changing magnetic field, aurora physics, and the human impacts of space weather for satellite operations and interplanetary travel.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Contact: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/higley.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	3500

A207. IMAGE: Space Science Mathematics

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Booklet
 Grade(s): Grades 6–9
 Msn/Prgm: IMAGE[B75]
 Description: This 15-page workbook contains selected topics in space weather research and presents them through a series of pre-algebraic review exercises in negative numbers, scientific notation, graph analysis, and other grade 6–9 real-world math problems.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/MathDocs/spacemath.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	3500	0	25000

A208. IMAGE: Space Weather CD-ROM

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): CD-ROM

Msn/Prgm: IMAGE[B75]

Description: The Space Weather CD-ROM is an award-winning resource that informs students and teachers about space weather issues through classroom activities, essays, multimedia presentations, and an interface to real-time space weather data on the Internet.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: http://earth.rice.edu/connected/space_weather.html

Secondary

URL: <http://www.solarstorms.org>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Dr. Patricia Reiff Rice University Houston, TX

Partner(s): Rice University Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	12000	0

A209. IMAGE: The Northern Lights

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): Booklet

Msn/Prgm: IMAGE[B75]

Description: This is a teacher guide with 10 activities developed by the IMAGE satellite program and a middle school math teacher. The projects include triangulation and parallax studies of the height of auroras and where to observe them (geometry), magnetism and auroral activity (graph analysis), essays by students in Alaska (Reading To Be Informed), and other projects that help students better understand the phenomenon of the northern lights.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/activity/NLightsCOLOR.pdf>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	2500

A210. IMAGE: "The SciFiles: The Case of the Technical Knockout"

Theme(s): Heliophysics

Msn/Prgm: IMAGE[B75]

Description: The SciFiles episode "The Case of the Technical Knockout" is an hour-long NASA-TV program for students, with a theme of space weather and a hypothetical storm that disables the Global Positioning System (GPS), for which students have to use clues to diagnose the cause of a recent spate of bad GPS positions during a geocaching exercise.

Lead: Mr. Ron Beard, NASA Langley Research Center, Hampton, VA 23681.

Primary URL: <http://scifiles.larc.nasa.gov/treehouse.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Partner(s): NASA Langley Research Center Hampton, VA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Jan 05	30 Sep 05	NASA Langley Research Center—Hampton, VA	0	2000000	100000

A211. IMAGE: Transit of Venus

Theme(s): Heliophysics, Planetary

Subject(s): Planetary Science

Format(s): Kit

Msn/Prgm: IMAGE[B75]

Description: This resource includes a number of unusual products that support student inquiry into the 2004 transit of Venus. Classroom activities present a comparison of the magnetospheres of Earth and Venus, the popular topic of Earth's magnetic reversals and changing field, and two activities that use satellite data to measure the solar parallax and Astronomical Unit (AU). Also featured is a newspaper archive of over 70 articles from the 1882 and 1874 transits of Venus.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.Primary URL: <http://image.gsfc.nasa.gov/poetry>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	0	850

A212. Imagine the Universe! CD-ROM (9th Edition)

Theme(s): Astrophysics

Subject(s): Physical Science, Space Science

Format(s): CD-ROM

Grade(s): Grades K–12, Community College, General Public, Higher Education

Msn/Prgm: HEASARC[B65]

Description: This CD-ROM contains four education Web sites captured from the Web in January 2005: Imagine the Universe (grades 9–12), StarChild (K–8), AstroCappella (7–12), and the 2004 Astronomy Picture of the Day. Together, they offer information and teacher resources on astronomy and space science for all grade levels. Each site contains its own learning adventure full of facts, music, movies, and beautiful images.

Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.**A213. In Search of Interacting Galaxies**

Theme(s): Astrophysics

Subject(s): Space Science

Format(s): PDF

Grade(s): Grades 6–12, Adult/Continuing Education, Community College, General Public

Msn/Prgm: HST[B49]

Description: Using the image and text from the Whirlpool Galaxy and Companion Galaxy lithograph, students are introduced to the topic of interacting galaxies, they formulate questions, conduct research, organize their materials, and present a report describing gravity's role in interacting galaxies.

Lead: Ms. Carole L. Rest, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: crest@stsci.edu.

Phone: 410-338-4590.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.**A214. In-Class Multimedia Programs in Support of the Space Weather Planetarium Show**

Theme(s): Heliophysics

Msn/Prgm: SRT[B28]

Description: We have partnered with the Emmy Award-winning NASA Center for Distance Learning (NCDL) to develop three new multimedia programs on aspects of space weather, including solar winds and their effect on the planets, the northern lights, and Earth's magnetosphere. The standards-based programs, in combination with the Center's current space weather offerings, will augment the planetarium show and will be integrated into curricula and teacher professional development programs being developed, enhancing their educational impact. Our well-proven strategy uses a team composed of educators, scientists, and evaluators during development. This year, we helped the NCDL produce a NASA Science Files program, "The Case of the Technical Knockout," which aired in May 2005. Focused on the impact of space weather on technology and how we predict space weather, much of the 1-hour show was shot in Boulder, CO, at CU-LASP and at the NOAA Space Environment Center. It is now in national distribution through the NCDL.

Contact: Dr. Emily Cobabe-Ammann, University of Colorado, Boulder, Boulder, CO 80309.

E-mail: ecobabe@lasp.colorado.edu. Phone: 303-735-5814.

A215. Infrared Radiation, Infrared Astronomy, and SOFIA

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: SOFIA mission and E/PO brochures, along with infrared astronomy and electromagnetic radiation educational materials, are distributed to school groups and teachers.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Contact: Ms. Darlene Mendoza, Astronomical Society of the Pacific, San Francisco, CA 94112.

E-mail: dvmendoza@mail.arc.nasa.gov. Phone: 650-604-1857.

Scientist(s):	Dr. Dana Backman	NASA Ames Research Center	Moffett Field, CA
	Dr. Eric Becklin	NASA Ames Research Center	Moffett Field, CA
	Ms. Lea Brulc	Monge Junior High School	Crest Hill, IL
	Ms. Margie Corp	Crowne Plaza Convention Center	Springfield, IL
	Mr. Tom Gates	Resource Area for Teachers (RAFT)	San Jose, CA
	Ms. Vivian Hoette	Yerkes Observatory, University of Chicago	Williams Bay, WI
	Mr. Allan Miller	Sterling Elementary School	Sterling, AK
	Mr. Dale Sanford	University of Chicago	Chicago, IL
	Mr. Casey Sean	Universities Space Research Association	Moffett Field, CA
	Mr. Jesse Worth	University of Chicago	Chicago, IL
Partner(s):	Search for Extraterrestrial Intelligence (SETI) Institute		Mountain View, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Oct 04	05 Oct 04	Novak's Restaurant—Whitewater, WI	0	40	0
11 Oct 04	11 Oct 04	University of Chicago—Chicago, IL	16	0	0
30 Nov 04	30 Nov 04	Mount Tamalpais School—Mill Valley, CA	26	0	0
06 Dec 04	06 Dec 04	Girls Scouts—Briarcliff Manor, NY	25	0	0
03 Feb 05	05 Feb 05	Space Exploration Educators Conference— Houston, TX	25	0	0
06 Feb 05	06 Feb 05	University of California, Berkeley—Berkeley, CA	0	25	0
03 May 05	03 May 05	University of California, Los Angeles— Los Angeles, CA	10	0	0
28 Jul 05	28 Jul 05	NASA Ames Research Center— Moffett Field, CA	14	0	0
04 Aug 05	04 Aug 05	NASA Ames Research Center— Moffett Field, CA	50	0	0
04 Aug 05	04 Aug 05	Resource Area for Teachers (RAFT)— San Jose, CA	25	0	0
31 Aug 05	31 Aug 05	Sterling Elementary School—Sterling, AK	31	0	0

A216. K-4 Math and Astronomy Through Hands-On Projects

Theme(s): Astrophysics

Msn/Prgm: IDEAS[B26]

Description: This project developed, field-tested, and disseminated a package of inquiry-based classroom lessons that are specifically designed to integrate the K-4 national standards in mathematics (National Council of Teachers of Mathematics) and astronomy (National Science Education Standards) using existing NASA science resources. Through a unique collaboration, the materials were developed by a team of six master elementary teachers working with university researchers who have considerable experience in curriculum development. These materials were disseminated widely using a triangulated approach encompassing the Internet as well as regional/national workshops for teachers.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: hbradbur@stsci.edu.
Phone: 410-338-4968.Partner(s): Kansas State University Salina, KS
Northern Arizona University Flagstaff, AZ**A217. Kepler: Paper Model Spacecraft**

Theme(s): Astrophysics

Subject(s): Space Science, Technology

Format(s): PDF

Grade(s): Grades 5-12, Adult/Continuing Education, General Public

Msn/Prgm: Kepler[B50]

Description: A simple paper model of the Kepler spacecraft. The model takes about 10 hours to put together.

Lead: Ms. Carole L. Rest, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: crest@stsci.edu.
Phone: 410-338-4590.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.Primary URL: <http://kepler.nasa.gov/ed/models&sims.html>

Secondary

URL: <http://kepler.nasa.gov/>

A218. "Learning About Phases of the Moon and Eclipses: A Guide for Teachers and Curriculum Developers"

Theme(s): Heliophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: The National Science Education Standards (1996), published by the National Research Council, recommend that students learn to explain Moon phases and eclipses by the time they graduate from eighth grade. It is clear from the research literature, however, that misconceptions about Moon phases and eclipses are widespread and resistant to change, even among adults. In the most prevalent misconception, children and adults confuse the explanations for phases and eclipses by assuming that lunar phases occur when the Moon enters Earth's shadow. The good news is that research studies have found approaches based on a constructivist view of learning to be very effective with students in grades five and above. While much research needs to be done, the studies reported in Astronomy Education Review are fruitful in offering ideas about how teachers and curriculum developers can help students achieve the goals outlined in the National Science Education Standards.

Lead: Dr. Cary Sneider, Museum of Science, Boston, MA 02114-1099. E-mail: nessie@mos.org.
Phone: 617-589-0227.

Primary URL: <http://aer.nao.edu/AERArticle.php?issue=7§ion=2&article=2>

Secondary

URL: <http://www.mos.org/nessie/education-research.php>

Scientist(s):	Ms. Lori Agan	Wheaton College	Norton, MA
	Ms. Claudine Kavanagh	Tufts University	Medford, MA
	Dr. Cary Sneider	Museum of Science	Boston, MA
	Ms. Karen Spence	Museum of Science	Boston, MA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jul 05	01 Jul 05	Museum of Science—Boston, MA	0	1000	0
09 Aug 05	09 Aug 05	Museum of Science—Boston, MA	0	1000	0

A219. "Learning About the Earth's Shape and Gravity: A Guide for Teachers and Curriculum Developers"

Theme(s): Heliophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: This article by Lori Agan and Cary Sneider examines the ways children perceive Earth's shape and gravity. It was published in the Astronomy Education Review, a peer-reviewed e-journal. The article synthesizes education research on how children grapple with the disparate notions of the flat ground versus the round Earth, up and down versus inward and outward, and the way gravity works on falling objects. Their findings include recommendations for age-appropriate instruction on these fundamental astronomical concepts-including delaying the more abstract aspects until the later years of elementary school.

Lead: Dr. Cary Sneider, Museum of Science, Boston, MA 02114-1099. E-mail: nessie@mos.org.
Phone: 617-589-0227.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.
Phone: 617-589-4228.

Primary URL: <http://aer.nao.edu/AERArticle.php?issue=4§ion=2&article=4>

Secondary

URL: <http://www.mos.org/nessie/education-research.php>

Scientist(s):	Ms. Karen Spence	Museum of Science	Boston, MA
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Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 Aug 05	09 Aug 05	Museum of Science—Boston, MA	0	1000	0

A220. Life in Space: An Astronomy/Astrobiology Unit for Upper Elementary and Middle School Students

Theme(s): Astrophysics, Planetary

Subject(s): Earth Science, Space Science, Technology, Life Science

Format(s): Web Site

Grade(s): Grades 5–9, Adult/Continuing Education, Community College, General Public

Msn/Prgm: HST[B49], NAI[B62]

Description: This is a two-part unit on the solar system and astrobiology. Part 1 focuses on the solar system. It is called "Colonize the Solar System." Students select a planet or moon in our solar system and design a space colony capable of supporting human life on it. Part 2 focuses on astrobiology. It is called "Build Your Own Planet." Students choose different physical properties of an extrasolar planet that they will explore in the hope of discovering life on it.

Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

A221. "Measuring Vegetation Health": Courses

Theme(s): Earth Science

Msn/Prgm: Measuring Vegetation Health[B19]

Description: The goals of Measuring Vegetation Health are to help people understand and apply the scientific principles of light so that they may use available technologies to collect valuable information about their surroundings, to

integrate these data with other remote sensing data, and then to build an integrated story of their environment. These stories may be shared to help enrich our understanding of environmental change across multiple scales of time and space. Seven collaborating institutions are developing, refining, and distributing a flexible set of hands-on activities and resources for students and the general public to teach them how to monitor vegetation health in their own environment with technologies that detect and manipulate light. The materials have multiple entry points and are modular so that they may be used for focused learning of just a few concepts or for more comprehensive learning that deals with complex systems.

Lead: Mr. Brian Rogan, Museum of Science, Boston, MA 02114-1099. E-mail: brogan@mos.org. Phone: 617-589-4252.

Primary URL: <http://mvh.sr.unh.edu>

Secondary URL: <http://www.forestwatch.sr.unh.edu/>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Aug 05	05 Aug 05	Museum of Science—Boston, MA	17	0	0

A222. MY NASA DATA

Theme(s): Earth Science

Msn/Prgm: MY NASA DATA[B20]

Description: The goal of the MY NASA DATA (Mentoring and inquiry using NASA Data on Atmospheric and Earth science for Teachers and Amateurs) project is to break down the barriers (such as file size and format) that prevent the use of authentic NASA Earth system science data in the classroom. The project features microsets of NASA Earth science satellite data that are both accessible to and of interest to the K–12 educator and citizen-scientist communities. The microsets are made from data holdings at the Atmospheric Science Data Center (ASDC) at NASA Langley Research Center and other sources. The Web site also features tools for data access, including a Live Access Server that allows teachers and students to explore an increasing portion of NASA's rich data collection. An e-mentor network is being developed to provide assistance to those using the data.

Lead: Dr. Lin Chambers, NASA Langley Research Center, Hampton, VA 23681. E-mail: l.h.chambers@larc.nasa.gov. Phone: 757-864-4371.

Primary URL: <http://mynasadata.larc.nasa.gov>

Scientist(s):					
Ms. Erica Alston	NASA Langley Research Center	Hampton, VA			
Dr. Lin Chambers	NASA Langley Research Center	Hampton, VA			
Dr. Jack Creilson	Science Applications International Corporation (SAIC)	Hampton, VA			
Dr. Roger Hathaway	NASA Langley Research Center	Hampton, VA			
Dr. Norman Loeb	Hampton University	Hampton, VA			
Mr. Byron Meadows	NASA Langley Research Center	Hampton, VA			
Ms. Susan Moore	Science Applications International Corporation (SAIC)	Hampton, VA			
Ms. Penny Oots	Science Applications International Corporation (SAIC)	Hampton, VA			
Ms. Carrie Phelps	Science Applications International Corporation (SAIC)	Hampton, VA			
Ms. Kathy Powell	Science Applications International Corporation (SAIC)	Hampton, VA			
Mr. A. David Risley	Science Applications International Corporation (SAIC)	Hampton, VA			
Dr. Waldo Rodriguez	NASA Langley Research Center	Hampton, VA			
Mr. David Young	NASA Langley Research Center	Hampton, VA			

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	09 Sep 05	NASA Langley Research Center—Hampton, VA	0	0	1539
25 Jul 05	29 Jul 05	NASA Langley Research Center—Hampton, VA	21	0	0

A223. New Horizons: Fact Sheet

Theme(s): Planetary

Subject(s): Space Science, Technology

Format(s): PDF, Pamphlet

Grade(s): Grade 8, General Public

Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]

Description: The New Horizons mission fact sheet provides an overview of the New Horizons mission to Pluto. It outlines the journey, the science objectives, and the spacecraft design characteristics and science payload. The fact sheet is available in hard copy or may be downloaded from a PDF file on the Web site. The fact sheet is appropriate for middle school through adult levels.

Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://pluto.jhuapl.edu/>

A224. New Horizons: Growth Chart Poster

Theme(s): Planetary

Subject(s): Mathematics, Physical Science, Space Science, Technology

Format(s): PDF, Poster/Wallsheet, Web Site

Grade(s): Grades K–5, General Public
 Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]
 Description: The New Horizons growth chart poster is appropriate for grades K–5. The front side of the poster features a scale diagram of the solar system, scale photos of the planets, a growth chart in centimeters, a bookmark, and a spacecraft image to cut out. The reverse side features a student fact sheet and a student activity, along with an overview map of the six New Horizons educational activities. The poster and educational activities can be downloaded from the site.
 Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://pluto.jhuapl.edu/education/educators.html>

A225. New Horizons: Web Site

Theme(s): Planetary
 Subject(s): Space Science, Technology
 Format(s): Web Site
 Grade(s): Grades K–8, Adult/Continuing Education, Community College, General Public, Higher Education
 Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]
 Description: The New Horizons Web site provides an overview of the New Horizons mission to Pluto, including the science objectives, mission timeline, spacecraft design characteristics, and instrument payload, as well as an education and outreach site including fun facts, a downloadable fact sheet, an educator guide and lesson plans, posters, and activities. Resources and links to related sites are provided.
 Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://pluto.jhuapl.edu/>

A226. Nightglow: Remote Sensing Activities

Theme(s): Earth Science
 Subject(s): Earth Science, Space Science
 Format(s): Web Site
 Grade(s): Grades 5–8, Community College, General Public
 Msn/Prgm: Nightglow[B6]
 Description: The Nightglow mission team developed a set of four lesson plans related to remote sensing as it applies to the atmosphere. The target audience is grades 5–8. The plans are available online in MS Word format.
 Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000945&mode=full>

A227. Origins Education Forum Evaluation Service

Theme(s): Astrophysics
 Msn/Prgm: ASO[B33]
 Description: Recognizing that educational products should be of high quality and meet the needs of educators, the Origins Education Forum offers formative evaluation assessment for resources created by the Origins missions. Formative evaluation assesses a product as it is being created, providing insights that help developers revise a product to better meet its goals and improve its effectiveness. It is used at all stages of product development, from initial planning and design through the prototype, pilot, and field versions. The evaluation team consists of professional evaluators, experienced educators, and Ph.D. scientists.
 Lead: Ms. Bonnie Eisenhamer, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: bonnie@stsci.edu.
 Phone: 410-338-4798.

A228. "Passport To The Solar System" (PTSS)

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: P2K[B32], SP[B70], Ulysses[B71], Voyager[B72], ACE[B73], IMAGE[B75], SAMPEX[B77], TRACE[B80], Polar[B82], Wind[B83], SOHO[B84], STEREO[B88], TIMED[B89], LWS/PO[B90], Yohkoh[B93], Cassini-Huygens Probe[B94], Galileo[B95], JPL SSE[B96], Mars Public Engagement[B97], MER[B99], MGS[B100], Mars Pathfinder[B101], Viking[B104], DPO[B106], CONTOUR[B107], MESSENGER[B109], NEAR[B110], DS1[B113]
 Description: "Passport To The Solar System" (PTSS) is a series of eight 15-minute video programs and two 30-minute teacher inservice programs, supported by hands-on activities and online resources. PTSS connects the ongoing exploration of the solar system to key concepts in the core science curriculum. Using NASA researchers as on-camera presenters (and as role models for careers in science), PTSS presents results from recent missions as examples of key scientific principles in fast-paced sequences designed to enliven the National Science Education Standards and AAAS/Project 2061 "Benchmarks" with current imagery and discoveries. The video programs-broadcast by participating PBS stations and State educational networks-are accompanied by printed

and online teacher guides that offer nearly 80 hands-on activities, an implementation guide, and a companion Web site. Updating the original series, Passport to Knowledge (P2K) also added a 30-minute program, "P2K Update-Solar System," that provides teachable moments from more recent research.

Lead: Ms. Erna Akuginow, Passport to Knowledge (P2K), Morristown, NJ 07960.

E-mail: ea@passporttoknowledge.com. Phone: 973-656-9403.

Primary URL: <http://passporttoknowledge.com/solarsystem>

Secondary

URL: <http://passporttoknowledge.com>

Partner(s): Air Force Research Laboratory

American Association for the Advancement of Science

American Geophysical Union

Analytical Graphics, Inc.

Arizona State University

Association of Science-Technology Centers

Boston University

California Institute of Technology (Caltech)

Carnegie Institution of Washington

Carnegie Observatories

Chandra X-ray Center

City University of New York (CUNY) Medgar Evers College

Clemson University

Colorado State University

Cornell University

CUNY City College of New York

DePaul University

European Southern Observatory

European Space Agency Research and Technology Centre

Fermi National Accelerator Laboratory

Gemini Observatory

Georgia Space Grant Consortium

Harvard University

Harvard-Smithsonian Center for Astrophysics

Idaho Helicopters, Inc.

ILC Dover, Inc.

Illinois State University

Institute for Astronomy

International Arctic Research Center

Johns Hopkins University

Johns Hopkins University Applied Physics Laboratory

Lockheed Martin Advanced Technology Center

Lockheed Martin Space Systems

Malin Space Science Systems

Marine Biological Laboratory

Massachusetts Institute of Technology

Mount Wilson Observatory

NASA Ames Research Center

NASA Glenn Research Center

NASA Goddard Institute for Space Studies

NASA Goddard Space Flight Center

NASA Headquarters

NASA Headquarters Office of Public Affairs

NASA Headquarters Science Mission Directorate

NASA Johnson Space Center

NASA Kennedy Space Center

NASA Langley Research Center

NASA Marshall Space Flight Center

National Center for Atmospheric Research

National Oceanic and Atmospheric Administration (NOAA)

National Radio Astronomy Observatory

National Science Foundation

National Severe Storms Laboratory

National Solar Observatory

Rice University

Search for Extraterrestrial Intelligence (SETI) Institute

Smithsonian National Air and Space Museum (NASM)

Hanscom Air Force
Base, MA

Washington, DC

Washington, DC

Malvern, PA

Tempe, AZ

Washington, DC

Boston, MA

Pasadena, CA

Washington, DC

Pasadena, CA

Cambridge, MA

Brooklyn, NY

Clemson, SC

Fort Collins, CO

Ithaca, NY

New York, NY

Chicago, IL

Santiago, Chile

Noordwijk, Netherlands

Batavia, IL

Hilo, HI

Atlanta, GA

Cambridge, MA

Cambridge, MA

Boise, ID

Frederica, DE

Normal, IL

Honolulu, HI

Fairbanks, AK

Baltimore, MD

Laurel, MD

Palo Alto, CA

Littleton, CO

La Jolla, CA

Woods Hole, MA

Cambridge, MA

Mount Wilson, CA

Moffett Field, CA

Cleveland, OH

New York, NY

Greenbelt, MD

Washington, DC

Washington, DC

Washington, DC

Houston, TX

Kennedy Space

Center, FL

Hampton, VA

Marshall Space Flight

Center, AL

Boulder, CO

Boulder, CO

Socorro, NM

Arlington, VA

Norman, OK

Sunspot, NM

Houston, TX

Mountain View, CA

Washington, DC

South Dakota School of Mines and Technology
 Southern Illinois University
 Space Telescope Science Institute
 Stanford University
 State University of New York (SUNY), Stony Brook
 U.S. Air Force
 U.S. Geological Survey
 U.S. Naval Observatory
 University Corporation for Atmospheric Research
 University of Alaska, Fairbanks
 University of Arizona
 University of California, Berkeley
 University of Chicago
 University of Colorado, Boulder
 University of Houston-Downtown
 University of Maryland
 University of Missouri-St. Louis
 University of Texas at Austin
 University of Texas at El Paso
 University of Utah
 University of Washington
 W.M. Keck Observatory
 Washington University
 Woods Hole Oceanographic Institute
 Yerkes Observatory, University of Chicago

Rapid City, SD
 Carbondale, IL
 Baltimore, MD
 Stanford, CA
 Stony Brook, NY
 Washington, DC
 Flagstaff, AZ
 Washington, DC
 Boulder, CO
 Fairbanks, AK
 Tucson, AZ
 Berkeley, CA
 Chicago, IL
 Boulder, CO
 Houston, TX
 College Park, MD
 St. Louis, MO
 Austin, TX
 El Paso, TX
 Salt Lake City, UT
 Seattle, WA
 Kamuela, HI
 St. Louis, MO
 Woods Hole, MA
 Williams Bay, WI

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Ethyl Universe Planetarium—Richmond, VA	881231	0	0
01 Oct 04	30 Sep 05	KERA-TV, Channel 13/Dallas, Fort Worth, Denton—Dallas, TX	235401	0	0
01 Oct 04	30 Sep 05	Ohio Educational Telecommunications Association—Cincinnati, OH	190000	0	0
01 Oct 04	30 Sep 05	WLRN-TV, Channel 17/Miami—Miami, FL	260000	0	0
01 Oct 04	30 Sep 05	WNPB-TV, Channel 24/Morgantown—Morgantown, WV	273860	0	0
01 Oct 04	30 Sep 05	WVPT-TV, Channel 51/Harrisonburg—Harrisonburg, VA	100000	0	0
01 Oct 04	30 Sep 05	WVPT-TV, Channel 51/Harrisonburg—Harrisonburg, VA	113890	0	0
01 Oct 04	30 Sep 05	WVPT-TV, Channel 51/Harrisonburg—Harrisonburg, VA	522160	0	0

A229. Pluto or Bust!

Theme(s): Planetary
 Subject(s): Physical Science, Space Science, Technology
 Format(s): PDF
 Grade(s): Grades 6–8, General Public
 Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]
 Description: This document describes the New Horizons mission to Pluto-Charon and the extreme challenges presented to the scientists and engineers designing the mission. Read about the very strange Pluto-Charon system and use the questions at the end for class discussion or as a writing assignment.
 Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspace.science.org/cgi-bin/search.plex?catid=10000974&mode=full>

A230. Project Spectra: Exploring Planets and Their Atmospheres Using Spectroscopy

Theme(s): Planetary
 Msn/Prgm: SRT[B28]
 Description: The goal of Project Spectra is to use the excitement of space exploration and curiosity about our solar system to teach audiences about spectroscopy (its physics, mechanics, applications, and history). The initial project focuses on the use of spectroscopy in exploring planets and their atmospheres. Over the grant period, our team will develop six curricular modules (including computer-based interactives and hands-on activities) targeting grades 9–12. Modules are designed to integrate both math and science standards and will be implemented and evaluated in two types of school settings before being made available nationwide via the Web. Over the last year, we have developed a standards-based scope and sequence that focus on exploring what the information obtained from light can tell us about planets and their atmospheres. We have developed three activities: a game

called Astrochronology; an engineering-focused construction of a spectroscope; and a lesson, using Ultraviolet Imaging Spectrograph (UVIS) data from Cassini, that encourages students to look at spectral data to determine the composition of Saturn's rings and Titan's atmosphere. The last of these exercises will be transitioned into a computer-based interactive. The scope and sequence will be tested in classrooms in the spring of 2006.

Lead: Dr. Francis Bagenal, University of Colorado, Boulder, CO 80309. E-mail: bagenal@colorado.edu. Phone: 303-492-2598.

A231. Satellite Observations in Science Education

Theme(s): Heliophysics

Msn/Prgm: Aqua[B2], Terra[B8], Satellite Observations in Science Education[B23]

Description: We seek to provide educators with unique teaching tools that closely tie students' learning with the excitement of discovery experienced while solving a question relevant to their interests. Involving students in data analysis activities enables them to discover relationships in the data, critique ideas, and delve into fundamental concepts frequently addressed in a research project. Appropriate integration of research into a course or curriculum increases faculty-student contact while engaging students in practical real-world problem solving. This increases students' retention of knowledge and the overall quality of the students' learning experience. Our long-term goal is to improve the quality of teaching and learning about the Earth system through the use of quality educational resources that make use of satellite observations. Our strategy to achieve this goal includes (1) creating effective tools and strategies for preparing students for careers in remote sensing, (2) promoting and supporting Internet-based remote sensing learning activities, and (3) training students on the appropriate use of observations to address complex real-world problems. We will develop an Internet-based education environment that provides students with interactive learning experiences that teach them remote sensing principles and exploratory data analysis. The Internet-based toolbox will provide access to real-time and historical data sets while making it easy for students to explore data to answer their own questions. Reusable Content Objects (RCOs) will be developed to guide students and teachers through effectively using various databases to address relevant science questions by means of modern methodologies. We use the term RCO to refer to a learning object that is flexible, can be customized for use with different content, operates in different environments, addresses a specific learning objective, and can be adapted for use with multiple audiences as well as a wide variety of platforms.

Lead: Dr. Steven Ackerman, University of Wisconsin-Madison, Madison, WI 53706. E-mail: stevea@ssec.wisc.edu. Phone: 608-263-3647.

Primary URL: <http://www.ssec.wisc.edu/sose/>

Secondary

URL: <http://www.ssec.wisc.edu/sose/rcos/>

Partner(s): University of California, Santa Barbara

Santa Barbara, CA

A232. Scale the Universe

Theme(s): Astrophysics

Subject(s): Earth Science, Mathematics, Physical Science, Space Science, Life Science

Format(s): Book, PDF

Grade(s): Grades 6–12, Adult/Continuing Education, Community College, Higher Education

Msn/Prgm: GLAST[B47]

Description: Task Oriented Physical Science (TOPS) Learning Systems created this 64-page educator unit with support from the GLAST mission. This guide covers scientific notation, orders of magnitude, and plotting using both linear and log scales. Students determine the relative scales of objects in the universe, from the very small to the very large.

Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000959&mode=full>

A233. "Science Concepts in Context"

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: P2K[B32], CXO[B44], CGRO[B45], HST[B49], SOFIA[B53], RXTE[B56], Keck Interferometer[B60], NAI[B62], 2MASS[B63], HEASARC[B65], COBE[B66], Ulysses[B71], Voyager[B72], ACE[B73], IMAGE[B75], TRACE[B80], Polar[B82], Wind[B83], SOHO[B84], TIMED[B89], LWS/PO[B90], Yohkoh[B93], Cassini-Huygens Probe[B94], Galileo[B95], JPL SSE[B96], Mars Public Engagement[B97], MER[B99], MGS[B100], Mars Pathfinder[B101], Viking[B104], NEAR[B110], Stardust[B111]

Description: Passport to Knowledge's (P2K's) "Science Concepts in Context" (SCiC) series prominently features contemporary space science and several current NASA missions in order to relate exciting content to key concepts in the science curriculum for grades 5–9. Since first debuting in the 2002–03 school year, the series has been carried by several major public television stations (including all 11 in New York State), statewide education networks (such as those in Wisconsin and Georgia), and many big-city school districts (such as Los Angeles, San Diego, and Dallas), reaching a potential K–12 student population of some 7 million students. Six of the sixteen 15-minute videos cover the terrestrial planets (principally Earth and Mars), the NEAR mission to Eros, comets, the Galileo mission to Jupiter, life in extreme environments, the most recent Hubble Space Telescope servicing mission, and the latest images and animations from several NASA spacecraft and Centers. Science concepts

illuminated by the four space science videos include gravity, force and motion, the electromagnetic spectrum, atoms and elements, fission and fusion, adaptation and natural selection (in the Life Science unit), and science as a human enterprise. A companion Web site (see URL below) provides hands-on activities and links to NASA resources. It correlates with the science frameworks and guidelines of all 50 States, as well as the National Science Education Standards and AAAS/Project 2061 benchmarks. Each video also features one or more NASA or NASA-supported researchers, such as Wayne Lee, Claudia Alexander, Lloyd French, Andrew Cheng, James Farquhar, Kathryn Flanagan, Ken Nealson, and Andrea Ghez. Through engaging, direct-to-camera presentations, the researchers explain the concepts and their application to real-world research. Balanced in gender and background, the researchers also serve as inspirational mentors for students of diverse cultures and origins.

Lead: Ms. Erna Akuginow, Passport to Knowledge (P2K), Morristown, NJ 07960.

E-mail: ea@passporttoknowledge.com. Phone: 973-656-9403.

Primary URL: <http://passporttoknowledge.com/scic>

Secondary

URL: <http://passporttoknowledge.com>

Partner(s): American Association for the Advancement of Science

American Geophysical Union

Carnegie Institution of Washington

Carnegie Observatories

Chandra X-ray Center

European Southern Observatory

European Space Agency Research and Technology Centre

Fermi National Accelerator Laboratory

Gemini Observatory

Harvard-Smithsonian Center for Astrophysics

ILC Dover, Inc.

Johns Hopkins University Applied Physics Laboratory

Lockheed Martin Advanced Technology Center

Lockheed Martin Solar and Astrophysics Laboratory

Lowell Observatory

Malin Space Science Systems

Marine Biological Laboratory

NASA Ames Research Center

NASA Astrobiology Institute (NAI)

NASA Glenn Research Center

NASA Goddard Institute for Space Studies

NASA Goddard Space Flight Center

NASA Headquarters

NASA Headquarters Office of Public Affairs

NASA Headquarters Science Mission Directorate

NASA Johnson Space Center

NASA Kennedy Space Center

NASA Marshall Space Flight Center

National Center for Atmospheric Research

National Oceanic and Atmospheric Administration (NOAA)

National Solar Observatory

Search for Extraterrestrial Intelligence (SETI) Institute

Smithsonian National Air and Space Museum (NASM)

Southwest Research Institute

Space Telescope Science Institute

U.S. Geological Survey

Woods Hole Oceanographic Institute

Washington, DC

Washington, DC

Washington, DC

Pasadena, CA

Cambridge, MA

Santiago, Chile

Noordwijk, Netherlands

Batavia, IL

Hilo, HI

Cambridge, MA

Frederica, DE

Laurel, MD

Palo Alto, CA

Palo Alto, CA

Flagstaff, AZ

La Jolla, CA

Woods Hole, MA

Moffett Field, CA

Moffett Field, CA

Cleveland, OH

New York, NY

Greenbelt, MD

Washington, DC

Washington, DC

Washington, DC

Houston, TX

Kennedy Space

Center, FL

Marshall Space Flight

Center, AL

Boulder, CO

Boulder, CO

Sunspot, NM

Mountain View, CA

Washington, DC

San Antonio, TX

Baltimore, MD

Flagstaff, AZ

Woods Hole, MA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Charlotte-Mecklenburg Schools—Charlotte, NC	117000	0	0
01 Oct 04	30 Sep 05	Ethyl Universe Planetarium—Richmond, VA	881231	0	0
01 Oct 04	30 Sep 05	Georgia Public Broadcasting—Atlanta, GA	1522611	0	0
01 Oct 04	30 Sep 05	KERA-TV, Channel 13/Dallas, Fort Worth, Denton—Dallas, TX	235401	0	0
01 Oct 04	30 Sep 05	KLCS-TV, Channel 58/Los Angeles—Los Angeles, CA	350000	0	0
01 Oct 04	30 Sep 05	Ohio Educational Telecommunications Association—Cincinnati, OH	190000	0	0
01 Oct 04	30 Sep 05	WGVU-TV, Channel 35/Grand Rapids—Grand Rapids, MI	1700000	0	0
01 Oct 04	30 Sep 05	WVPT-TV, Channel 51/Harrisonburg—Harrisonburg, VA	100000	0	0

A234. Scientists in Schools: Preparing for K–12 Outreach

Theme(s): Heliophysics

Subject(s): Earth Science, Physical Science, Space Science, Technology

Format(s): Web Site

Grade(s): Grades K–12, Adult/Continuing Education

Msn/Prgm: LWS/PO[B90]

Description: Scientists in Schools is an online guide for scientists who would like to foster connections between their research interests and the K–12 education community. Scientist visits to K–12 classrooms can interest students in striving for a future career in the sciences. It can also help students to recognize the ways that research positively impacts society, and their own lives in particular. Scientists in Schools provides scientists with tools and background knowledge helpful in creating effective and enjoyable classroom visits. It includes information about K–12 schools, how and what students are learning about science at various grade levels, definitions of common education terms, a checklist to facilitate the logistics of a school visit, guidance on how to design interesting classroom presentations, and links to additional helpful resources.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000976&mode=full>**A235. SOAR: Student Opportunities with Astronomy Resources**

Theme(s): Astrophysics

Msn/Prgm: IDEAS[B26]

Description: The primary objectives and scope of the project were as follows: (1) To create an Astronomy Academy for underserved/minority schools and students that would increase interest in astronomy and the sciences. Underlying this goal, we had it in our scope to bring astronomy education to more underserved and minority students than we have in the past. (2) To develop a basic understanding in student interns of how astronomy can be taught both formally and informally by having them participate in an educational program that provides them with hands-on training that they in turn teach to younger students. (3) To provide high school students with summer internships where they can demonstrate their astronomy content knowledge.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218.

E-mail: hbradbur@stsci.edu. Phone: 410-338-4968.

Scientist(s): Dr. John T. McGraw University of New Mexico

Albuquerque, NM

Partner(s): Albuquerque Public Schools

Albuquerque, NM

Rio Rancho Public Schools

Rio Rancho, NM

University of New Mexico

Albuquerque, NM

A236. SOFIA: Material Distribution

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: The SOFIA team distributed printed materials, images, video footage, and “Active Astronomy” kits regarding electromagnetic radiation, infrared astronomy, and the SOFIA mission to school and community groups.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Contact: Ms. Darlene Mendoza, Astronomical Society of the Pacific, San Francisco, CA 94112.

E-mail: dvmendoza@mail.arc.nasa.gov. Phone: 650-604-1857.Primary URL: <http://sofia.arc.nasa.gov/Edu/edu.html>

Scientist(s): Dr. Dana Backman NASA Ames Research Center
 Dr. Matt Bobrowsky Space Telescope Science Institute
 Ms. Gail Chaid Independence High School
 Ms. Kathryn Guimond College of Charleston
 Ms. Vivian Hoette Yerkes Observatory, University of Chicago
 Mr. Tom LaPorte Aerospace Data International
 Dr. Cherilynn Morrow Space Science Institute
 Mr. Jacob Noel-Storr Columbia University
 Ms. Modesto Robles Del Valle Independent School District
 Dr. Ron Samiec Bob Jones University
 Ms. Kay Tobola Lockheed Martin Corporation

Moffett Field, CA
 Baltimore, MD
 San Jose, CA
 Charleston, SC
 Williams Bay, WI
 La Habra, CA
 Boulder, CO
 New York, NY
 Del Valle, TX
 Greenville, SC
 Houston, TX
 Mountain View, CA
 Moffett Field, CA

Partner(s): Search for Extraterrestrial Intelligence (SETI) Institute
 Universities Space Research Association

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	27 Oct 04	27 Oct 04	Chicago State University—Chicago, IL	12	0	0
	24 Feb 05	26 Feb 05	NASA Johnson Space Center—Houston, TX	3000	0	0

10 Mar 05	12 Mar 05	Utah's Expanding Your Horizons (EYH) Conference—Orem, UT	0	1400	0
16 Mar 05	18 Mar 05	University of Arizona—Tucson, AZ	0	2000	0
06 Apr 05	09 Apr 05	Council for Exceptional Children Convention & Expo—Baltimore, MD	0	7000	0
25 Apr 05	28 Apr 05	Avionics Maintenance Conference—Atlanta, GA	0	800	0
27 Jun 05	01 Jul 05	Uncle Billy's Hilo Hotel—Hilo, HI	35	0	0

A237. SOFIA: Newsletter Distribution

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: The SOFIA E/PO newsletter updates SOFIA educators nationwide. This newsletter covers the latest news of SOFIA, such as (1) a SOFIA project overview with Web link, (2) a SOFIA project update—latest news and Web link to an astronomer's newsletter, (3) introductions to the SOFIA E/PO staff, (4) a report on SOFIA E/PO accomplishments for the past year, with Web link, and (5) upcoming SOFIA E/PO activities.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Contact: Ms. Darlene Mendoza, Astronomical Society of the Pacific, San Francisco, CA 94112.

E-mail: dvmendoza@mail.arc.nasa.gov. Phone: 650-604-1857.Primary URL: <http://www.sofia.usra.edu/>**A238. Solar Dynamics Observatory (SDO): Other Educational Projects**

Theme(s): Heliophysics

Msn/Prgm: SDO[B91]

Description: The Solar Dynamics Observatory educational projects present the science of the mission through educational products developed for use in the classroom to provide a clear understanding of the science of the Sun.

Lead: Ms. Deborah Scherrer, Stanford University, Stanford, CA 94305. E-mail: dscherrer@solar.stanford.edu.

Phone: 650-723-1495.

Primary URL: http://sdo.gsfc.nasa.gov/sdo_mission_science.htm

Scientist(s):	Ms. Kelly Beck	Stanford University	Stanford, CA
	Dr. Keh-cheng Chu	Stanford University	Stanford, CA
	Mr. Morris Cohen	Stanford University	Stanford, CA
	Ms. Shannon Lee	Chabot Community College	Hayward, CA
	Mr. David Rogers	4-H, Palomares	Castro Valley, CA
	Ms. Deborah Scherrer	Stanford University	Stanford, CA
	Dr. Philip Scherrer	Stanford University	Stanford, CA
	Mr. Scott Winegarden	Stanford University	Stanford, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	624	0	0
18 Oct 04	18 Oct 04	Harker School of San Jose—San Jose, CA	96	0	0
21 Oct 04	21 Oct 04	University of California, Berkeley—Berkeley, CA	30	0	0
17 Mar 05	17 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	20	0	0
17 Mar 05	17 Mar 05	Palomares Elementary School—Castro Valley, CA	131	0	0
12 Apr 05	12 Apr 05	Independent Elementary School of Castro Valley—Castro Valley, CA	332	0	0
13 May 05	13 May 05	Wagner Ranch Elementary School—Orinda, CA	258	0	0
22 Jul 05	22 Jul 05	Stanford University—Stanford, CA	32	0	0

A239. Solar Terrestrial Relations Observatory (STEREO): Mission Information

Theme(s): Heliophysics

Subject(s): Space Science

Format(s): PDF, DVD

Grade(s): Grades 6–8

Msn/Prgm: STEREO[B88]

Description: Ever wonder why two spacecraft are needed to study the Sun or how you build them to operate in the extreme conditions they'll experience in space? How do you launch two spacecraft on one rocket? Using a broadcast news approach, a 6-minute video, "Solar News Network: NASA Gets a Double Dose of the Sun," can help answer these questions. Available as a DVD or downloadable from the STEREO Web site (closed-caption version available).

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.Primary URL: <http://stereo.jhuapl.edu/>

A240. Solar Week

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36], Yohkoh[B93]

Description: Solar Week is a weeklong online curriculum with daily topics on the Sun, including "Sun as a Star," "The Sun Close Up," "Solar Activity," "Eclipses," and "Careers." Each day contains a game, an activity, topical questions, a related life science topic, teacher information, and an "Ask the Scientist" page. One highlight is a live message board where students can interact with solar scientists.

Lead: Ms. Karin Hauck, University of California, Berkeley, Berkeley, CA 94720. E-mail: karin@ssl.berkeley.edu. Phone: 510-642-2343.Primary URL: <http://www.solarweek.org>

Scientist(s): Dr. Mitzi Adams

NASA Marshall Space Flight Center

Marshall Space Flight Center, AL
Cambridge, MA
Pasadena, CA
Glasgow,
United KingdomDr. Sally Baliunas
Dr. Christina Cohen
Dr. Lyndsay FletcherHarvard-Smithsonian Center for Astrophysics
California Institute of Technology (Caltech)
University of Glasgow

Dr. Nicola Fox

Johns Hopkins University Applied Physics Laboratory

Laurel, MD
Berkeley, CA
Berkeley, CAMs. Karin Hauck
Dr. Isabel Hawkins
Dr. Therese Kucera
Dr. Kimberly-Dawn Leka
Dr. Dawn Myers
Dr. Laura Peticolas
Dr. Patricia Reiff
Mr. Igor Ruderman
Dr. Kristine Sigsbee
Dr. Jim StryderUniversity of California, Berkeley
University of California, Berkeley
NASA Goddard Space Flight Center
Northwest Research Associates
NASA Goddard Space Flight Center
University of California, Berkeley
Rice University
University of California, Berkeley
NASA Goddard Space Flight Center
Western Colorado MuseumGreenbelt, MD
Bellevue, WA
Greenbelt, MD
Berkeley, CA
Houston, TX
Berkeley, CA
Greenbelt, MD
Grand Junction, CO
Houston, TX

Partner(s): Rice University

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Feb 05	04 Mar 05	University of California, Berkeley—Berkeley, CA	0	563	0

A241. Space Place: Conferences

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: LISA[B51], LWS/PO[B90], ST-5[B92]

Description: Space Place participates in several educator conferences a year. We take this opportunity not only to promote the Space Place and its products, but also to get feedback from educators regarding these products and to find out what is needed in the classroom.

Contact: Ms. Liliana Novati, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.Primary URL: <http://spaceplace.nasa.gov>Scientist(s): Mr. Sean Greenwalt
Dr. Philip Plait
Ms. Sarah SilvaSonoma State University
Sonoma State University
Sonoma State UniversityRohnert Park, CA
Rohnert Park, CA
Rohnert Park, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	2134	0

A242. Space Place: Contributions to ITEA's "The Technology Teacher"

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ST-5[B92], New Horizons (Pluto-Kuiper Belt) Mission[B105]

Description: The Space Place provides an original, NASA-mission-related, classroom activity article in each of the eight issues per year of the International Technology Education Association's (ITEA's) member journal, The Technology Teacher. This journal targets middle school teachers. These articles are archived and available to all teachers on the Space Place Web site 3 months after they are published by ITEA. They can be found at http://spaceplace.jpl.nasa.gov/en/educators/teachers_page2.shtml.Contact: Ms. Liliana Novati, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.Primary URL: <http://spaceplace.jpl.nasa.gov>

Secondary

URL: <http://www.iteawww.org>Scientist(s): Ms. Diane Fisher
Mr. Alexander NovatiNASA Jet Propulsion Laboratory
NASA Jet Propulsion LaboratoryPasadena, CA
Pasadena, CA
Reston, VA

Partner(s): International Technology Education Association

A243. Space Place: Web Site

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: LISA[B51], SST[B52], GALEX[B55], ST-7[B64], ST-5[B92], Stardust[B111]
 Description: The Space Place Web site is the centerpiece of the Space Place outreach program. It is aimed at children aged 8–11. It has been in existence since 1998 and has won numerous awards.
 Contact: Ms. Liliana Novati, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.
 Primary URL: <http://spaceplace.jpl.nasa.gov>
 Secondary URL: <http://spaceplace.nasa.gov>
 Scientist(s): Ms. Diane Fisher NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Enrique Garcia NASA Jet Propulsion Laboratory Pasadena, CA
 Dr. Chris Martin California Institute of Technology (Caltech) Pasadena, CA
 Mr. Anil Natha NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Alexander Novati NASA Jet Propulsion Laboratory Pasadena, CA

A244. Space Science Education Resource Directory

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: ASO[B33], SSE[B34], SEU[B35], SECEF[B36]
 Description: The Origins Education Forum operates and maintains the Space Science Education Resource Directory (SSERD). The SSERD is an online repository of NASA's space science education materials, targeted toward K–12 educators. Users can browse the SSERD for materials by grade level and subject or by topic. Keyword and advanced searches are also available for more direct access to specific products.
 Lead: Dr. Denise Smith, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: dsmith@stsci.edu. Phone: 410-338-4434.
 Primary URL: <http://teachspacescience.org>

A245. Space Science in K–12 Schools

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: S2N2 B/F[B43]
 Description: S2N2's program for space science in K–12 schools is dominated by Oregon's efforts to reach teachers and students in rural areas via traveling E/PO professional Rick Kang. He gives presentations and leaves teachers in the classes he visits with information about SMD programs and materials. Oregon representatives feel that this is the most effective way for their program to have an influence on K–12 education in the State.
 Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.
 Primary URL: <http://www.s2n2.org>
 Scientist(s): Ms. April Christenson University of Idaho Moscow, ID
 Dr. Tim Ewers University of Idaho Moscow, ID
 Ms. Marge Green Boxelder Elementary School Glenrock, WY
 Ms. Rosa Hemphill Oregon Episcopal School Canby, OR
 Mr. Vincent Hurtig Chief Dull Knife College Lame Deer, MT
 Ms. Mary Kadooka Institute for Astronomy Honolulu, HI
 Dr. Rick Kang Pine Mountain Observatory Eugene, OR
 Dr. Donna Minton Montana NASA Space Grant Bozeman, MT
 Ms. Lynn Murray Park Elementary School Casper, WY
 Dr. Michael Odell University of Idaho Moscow, ID
 Ms. Chris Rashleigh Meadowlark School Gillette, WY
 Dr. Michele Stark University of Wyoming Laramie, WY
 Ms. Cindy Tamashiro Kapunahala Elementary School Kaneohe, HI
 Ms. Julie Webster NASA Jet Propulsion Laboratory Pasadena, CA
 Partner(s): Oregon Space Grant Consortium Corvallis, OR

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
05 Oct 04	05 Oct 04	Awbrey Park Elementary School—Eugene, OR	85	0	0
12 Oct 04	13 Oct 04	Houk Middle School—Salem, OR	155	0	0
14 Oct 04	14 Oct 04	Looking Glass Elementary School—Roseburg, OR	42	0	0
15 Oct 04	15 Oct 04	Agnes Stewart Middle School—Springfield, OR	15	0	0
18 Oct 04	18 Oct 04	Lewelling Elementary School—Milwaukie, OR	18	0	0
18 Oct 04	18 Oct 04	Tigard High School—Tigard, OR	33	0	0
19 Oct 04	20 Oct 04	Windy River Elementary School—Boardman, OR	83	0	0
20 Oct 04	20 Oct 04	Heppner High School—Heppner, OR	27	0	0
21 Oct 04	21 Oct 04	Mosier Elementary School—Mosier, OR	81	0	0
22 Oct 04	22 Oct 04	May Street Elementary School—Hood River, OR	220	0	0
26 Oct 04	28 Oct 04	Eugene Christian School—Eugene, OR	137	0	0
27 Oct 04	27 Oct 04	Douglas High School—Winston, OR	5	0	0
27 Oct 04	27 Oct 04	McGovern Elementary School—Winston, OR	76	0	0

01 Nov 04	29 Apr 05	University of Idaho—Moscow, ID	1172	0	0
03 Nov 04	03 Nov 04	Jefferson County Middle School—Madras, OR	84	0	0
04 Nov 04	04 Nov 04	Jefferson County Middle School—Madras, OR	113	0	0
05 Nov 04	05 Nov 04	Madras Elementary School—Madras, OR	140	0	0
12 Nov 04	12 Nov 04	Isaac Newton Magnet School—Newton, OR	65	0	0
15 Nov 04	15 Nov 04	Oregon Episcopal School—Canby, OR	30	0	0
16 Nov 04	16 Nov 04	St. Mary's School—Medford, OR	34	0	0
29 Nov 04	30 Nov 04	Adams Elementary School—Eugene, OR	54	0	0
02 Dec 04	02 Dec 04	Glendale Elementary School—Glendale, OR	45	0	0
02 Dec 04	02 Dec 04	Wooley Center—Roseburg, OR	13	0	0
07 Dec 04	07 Dec 04	Ellis Parker Elementary School—Eugene, OR	23	0	0
08 Dec 04	08 Dec 04	Tualatin High School—Tualatin, OR	32	0	0
09 Dec 04	09 Dec 04	Scenic Middle School—Central Point, OR	125	0	0
10 Dec 04	10 Dec 04	Ashland High School—Ashland, OR	32	0	0
14 Dec 04	14 Dec 04	Mitch Charter School—Tualatin, OR	49	0	0
15 Dec 04	15 Dec 04	Silverton High School—Silverton, OR	125	0	0
07 Jan 05	07 Jan 05	Boxelder Elementary School—Glenrock, WY	10	0	0
18 Jan 05	18 Jan 05	Theodore Roosevelt Middle School—Eugene, OR	47	0	0
19 Jan 05	20 Jan 05	Crest Drive Elementary School—Eugene, OR	68	0	0
24 Jan 05	24 Jan 05	Kapunahala Elementary School—Kaneohe, HI	93	0	0
24 Jan 05	27 Jan 05	O'Hara Catholic School—Eugene, OR	32	0	0
25 Jan 05	26 Jan 05	Valor Elementary School—Woodburn, OR	185	0	0
29 Jan 05	29 Jan 05	Park Elementary School—Casper, WY	42	0	0
02 Feb 05	03 Feb 05	Clear Lake Elementary School—Eugene, OR	50	0	0
04 Feb 05	04 Feb 05	Ackerman Middle School—Canby, OR	54	0	0
07 Feb 05	07 Feb 05	Boxelder Elementary School—Glenrock, WY	24	0	0
08 Feb 05	09 Feb 05	Valor Elementary School—Woodburn, OR	136	0	0
09 Feb 05	09 Feb 05	Whiteaker Middle School—Keizer, OR	23	0	0
14 Feb 05	14 Feb 05	Central Linn High School—Halsey, OR	169	0	0
15 Feb 05	17 Feb 05	Springfield Middle School—Springfield, OR	85	0	0
17 Feb 05	17 Feb 05	University of Oregon—Eugene, OR	40	0	0
22 Feb 05	25 Feb 05	Astoria Middle School—Astoria, OR	255	0	0
01 Mar 05	01 Mar 05	Ellis Parker Elementary School—Eugene, OR	21	0	0
02 Mar 05	02 Mar 05	Oregon Episcopal School—Portland, OR	1	0	0
02 Mar 05	03 Mar 05	Durham Elementary School—Tigard, OR	101	0	0
04 Mar 05	04 Mar 05	Malabon Elementary School—Eugene, OR	54	0	0
10 Mar 05	10 Mar 05	Waterville Elementary School—Springfield, OR	48	0	0
15 Mar 05	15 Mar 05	Waterville Elementary School—Springfield, OR	48	0	0
16 Mar 05	16 Mar 05	Tualatin High School—Tualatin, OR	91	0	0
29 Mar 05	29 Mar 05	Pinehurst Elementary School—Ashland, OR	16	0	0
30 Mar 05	31 Mar 05	Ashland Middle School—Ashland, OR	395	0	0
05 Apr 05	07 Apr 05	Colin Kelly-DaVinci Middle School—Eugene, OR	53	0	0
13 Apr 05	13 Apr 05	Westside Elementary School—Hood River, OR	113	0	0
14 Apr 05	14 Apr 05	Wy'East Middle School—Hood River, OR	192	0	0
15 Apr 05	15 Apr 05	Lava Ridge Elementary School—Bend, OR	95	0	0
19 Apr 05	20 Apr 05	Robert Gray Middle School—Portland, OR	154	0	0
21 Apr 05	21 Apr 05	Rieke Elementary School—Portland, OR	83	0	0
27 Apr 05	28 Apr 05	Meadow View School—Eugene, OR	69	0	0
03 May 05	04 May 05	Creswell Middle School—Creswell, OR	82	0	0
04 May 05	04 May 05	University of Oregon—Eugene, OR	16	0	0
05 May 05	05 May 05	Kings Valley Charter School—Philomath, OR	2	0	0
06 May 05	06 May 05	Sweet Home Junior High School— Sweet Home, OR	164	0	0
09 May 05	09 May 05	Long Creek School—Long Creek, OR	16	0	0
10 May 05	10 May 05	Dayville School—Dayville, OR	29	0	0
11 May 05	12 May 05	Baker High School—Baker, OR	119	0	0
18 May 05	18 May 05	Lincoln Junior High School—Oakland, OR	47	0	0
19 May 05	19 May 05	Hidden Valley High School—Grants Pass, OR	65	0	0
19 May 05	19 May 05	Rogue Community College—Grants Pass, OR	15	0	0
20 May 05	20 May 05	Bertha Holt Elementary School—Eugene, OR	83	0	0
20 May 05	20 May 05	Pine Elementary-Junior High School— Mountain Home, ID	14	0	0
21 May 05	21 May 05	Lewiston Senior High School—Lewiston, ID	10	0	0
24 May 05	24 May 05	Gilham Elementary School—Eugene, OR	89	0	0
25 May 05	25 May 05	Portland Community College Rock Creek— Portland, OR	21	0	0
26 May 05	26 May 05	The Dalles Middle School—The Dalles, OR	290	0	0
27 May 05	27 May 05	Dufur School—Dufur, OR	141	0	0

28 May 05	28 May 05	McMinnville High School—McMinnville, OR	11	0	0
31 May 05	02 Jun 05	Thurston Middle School—Springfield, OR	189	0	0
03 Jun 05	03 Jun 05	Jefferson County Middle School—Madras, OR	100	0	0
06 Jun 05	10 Jun 05	Hamlin Middle School—Springfield, OR	143	0	0
09 Jun 05	10 Jun 05	James Madison Middle School—Eugene, OR	107	0	0
12 Jun 05	02 Jul 05	Institute for Astronomy—Hilo, HI	15	0	0
18 Jul 05	19 Jul 05	Chief Dull Knife College—Lame Deer, MT	20	0	0
04 Aug 05	04 Aug 05	Meadowlark School—Gillette, WY	16	0	0

A246. Space Sciences for the “Physics First” Curriculum

Theme(s): Heliophysics

Msn/Prgm: SRT[B28]

Description: Our project is adapting existing and developing new curriculum materials based upon the space science resources available at the Lockheed Martin Solar and Astrophysics Laboratory to encourage the transition to the Physics-First curriculum. These materials are being field-tested in Evergreen Valley High School (EVHS) classrooms and will be distributed to the wider community through formal mechanisms within the East Side Union High School District and through presentations at State and national education conferences. In addition, we work with EVHS to further develop their physics teachers' understanding of the role that space science plays in society and to help them convey into the classroom the methods and technologies used in the laboratory.

Lead: Ms. Merle Boxill, East Side Union High School District, San Jose, CA 95133. E-mail: mboxill@esuhsd.org. Phone: 408-347-7010.

Contact: Dr. Neal Hurlburt, Lockheed Martin Advanced Technology Center, Palo Alto, CA 94304. E-mail: hurlburt@lmsal.com. Phone: 650-354-5504.

A247. Space Weather Sounds Scavenger Hunt (SWSSH)

Theme(s): Heliophysics

Msn/Prgm: SRT[B28]

Description: The objective of SWSSH is to stimulate interest in science through student discovery and investigation of space-induced very-low-frequency (VLF) radio waves. Students will be challenged to identify and to log (via a Web interface) discoveries of these VLF waves, much like keeping a birdwatcher's life list or being involved in a scavenger hunt. Students will “discover” the VLF waves via their own Interactive NASA Space Physics Ionospheric Radio Experiments (INSPIRE) receivers or over the Internet. Since VLF waves are related to space weather, students are easily engaged in learning about the Earth-Sun magnetic connection. SWSSH uses INSPIRE receivers whose data are continuously streamed on the Internet. SWSSH has established the first full-time VLF receiver under the aurora in Alaska. Materials for students and teachers are being developed through annual teacher workshops (the first was in July 2005) and will be presented at teacher symposia. An educational oversight committee composed of K–12 educators has been established to ensure effective implementation.

Contact: Ms. Mitzi Adams, NASA Marshall Space Flight Center, Marshall Space Flight Center, AL 35812. E-mail: mitzi.adams@nasa.gov. Phone: 256-961-7626.

Primary URL: http://sd50tvm.nsstc.nasa.gov/space_phys

Scientist(s):	Dr. Mitzi Adams	NASA Marshall Space Flight Center	Marshall Space Flight Center, AL
	Dr. Dennis Gallagher	NASA Marshall Space Flight Center	Marshall Space Flight Center, AL
	Dr. James Spann	NASA Marshall Space Flight Center	Marshall Space Flight Center, AL

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
06 Jul 05	08 Jul 05	NASA Marshall Space Flight Center— Marshall Space Flight Center—AL	9	0	0

A248. Special Needs Resource Group

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ASO[B33], SECEF[B36], SERCH B/F[B41]

Description: The purpose of the Special Needs Resource Group (SNRG, pronounced synergy) is to provide NASA space science mission planners, principal investigators, and product developers with guidance, support, and product enhancement strategies to improve the usability of NASA products for audiences concerned with the education of individuals with special needs. The objectives of SNRG are to (1) raise a level of awareness for mission planners, principal investigators, and product developers about individuals with special needs, (2) form and maintain a network of educators, special-needs experts, and product developers who will continue to work together to raise awareness of special-needs educational materials and provide assistance in Earth and space science product modifications when required, (3) provide direction in the formative stages of SMD product development and provide modification strategies for those Earth and space science products that have received exemplary status from the SMD product review, (4) generate effective mechanisms for product modification, which will include developing a network of special-needs educators that may be utilized as beta testers, establishing and maintaining communication and ties with special-needs resource providers, professional societies and organizations (e.g., Council of Exceptional Children, American Foundation for the Blind), and developing a handbook of

best practices for members of the NASA SMD Education Support Network, (5) provide professional development opportunities to Earth and space scientists and education specialists, and (6) provide an informational Web site.

Lead: Ms. Kathryn Guimond, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
E-mail: serch@cofc.edu. Phone: 888-873-9475.

Contact: Ms. Cynthia Atkinson, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
E-mail: exceptional@cofc.edu. Phone: 843-953-7852.

Primary URL: <http://serch.cofc.edu/special/snrg.htm>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	College of Charleston—Charleston, SC	16	0	0

A249. Stellar Mysteries, Stellar Detectives

Theme(s): Astrophysics
Msn/Prgm: SRT[B28], SST[B52]
Description: To capture the imagination of youth and the general public, Stellar Mysteries, Stellar Detectives (SMSD) capitalizes on their inherent interest in color, light, and astronomy. SMSD engages 8- to 14-year-old students in chemistry and astronomy, emphasizing spectroscopy and stellar evolution. As part of Whyville, the SMSD Web site contains interactive, simulation-based activities that engage these students in exploring the fundamental concepts behind spectroscopy and its use in astronomy. The activities are designed around real-time, scientifically accurate simulations. Children are able to interact with and learn from one another within the context of the Whyville community. The SMSD activities offer a groundbreaking opportunity to introduce spectroscopy and stellar evolution to young people. Most educational resources in astronomy make great use of the potential for pretty pictures, but often at the expense of glossing over the vital role played by spectroscopy in true scientific practice. SMSD focuses on this important aspect, specifically focusing on how spectroscopy links to the chemistry of astronomical objects. Students will learn about spectroscopy, absorption lines, emission lines, and chemical signatures of various elements, using a virtual, interactive laboratory. The SMSD program addresses the following goals and objectives: (1) engage elementary and middle school students, focusing on an activity-based, interactive simulation of science and astronomy, (2) develop an interactive Web site that showcases the science and technology of SMSD in a format that models the process of NASA design and review, (3) convey a basic understanding of spectroscopy, and (4) promote an understanding of the use of spectroscopy in stellar astronomy.

Lead: Dr. Brad Hansen, University of California, Los Angeles, Los Angeles, CA 90095. E-mail: hansen@astro.ucla.edu.
Phone: 310-825-5924.

Contact: Ms. Doris Daou, California Institute of Technology (Caltech), Pasadena, CA 91125.
E-mail: daou@ipac.caltech.edu. Phone: 626-395-8668.

Primary URL: <http://d.whyville.net/smmk/spectrum/labinside>

Secondary

URL: <http://d.whyville.net/smmk/nice>

Scientist(s):	Ms. Doris Daou	California Institute of Technology (Caltech)	Pasadena, CA
	Mr. Art Hammon	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Brad Hansen	University of California, Los Angeles	Los Angeles, CA
Partner(s):	Whyville Numedeon, Inc.		Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Whyville Numedeon, Inc.—Pasadena, CA	0	10000	10000

A250. STEREO: Fact Sheet

Theme(s): Heliophysics
Subject(s): Space Science
Format(s): Pamphlet
Grade(s): Grades 6–8, General Public
Msn/Prgm: STEREO[B88]
Description: The STEREO mission fact sheet provides an overview of the mission and a spacecraft image depicting instruments and key characteristics of the spacecraft. The fact sheet can be downloaded as a PDF file from the STEREO Web site.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://stereo.jhuapl.edu/>

A251. STEREO: Web Site

Theme(s): Heliophysics
Subject(s): Space Science
Format(s): Web Site
Grade(s): Grades 6–8, General Public
Msn/Prgm: STEREO[B88]

Description: The STEREO Web site provides an overview of the mission, science objectives, and challenges an overview of the twin observatories; education and outreach activities, including a downloadable fact sheet, lesson plans, and video and a gallery of photos depicting the twin observatories being built.

Lead: Mr. Nathan James, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: nate.james@gsfc.nasa.gov. Phone: 301-286-9789.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000981&mode=full>

A252. Student Nitric Oxide Explorer Guest Investigator: Modeling and Observations of Solar Influences on Thermospheric Nitric Oxide

Theme(s): Heliophysics
Subject(s): Space Science
Format(s): Web Site
Msn/Prgm: SRT[B28], SNOE[B78]
Description: This project supports the development of education and outreach content on the Windows to the Universe Web site on topics relevant to the Student Nitric Oxide Explorer (SNOE) mission. Topics for development include atmospheric structure and composition, nitric oxides, and solar activity. Information about the resources is disseminated through education workshops and training opportunities at NCAR, NSTA, and other regional professional meetings.

Lead: Dr. Roberta Johnson, University Corporation for Atmospheric Research, Boulder, CO 80305.
E-mail: rmjohnsn@ucar.edu. Phone: 303-497-2591.

Scientist(s): Dr. Daniel Marsh University Corporation for Atmospheric Research Boulder, CO

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	University Corporation for Atmospheric Research—Boulder, CO	0	0	384000

A253. Student Observation Network: Tracking a Solar Storm

Theme(s): Heliophysics
Msn/Prgm: SECEF[B36], ACE[B73], IMAGE[B75], RHESSI[B76], THEMIS[B79], TRACE[B80], Polar[B82], Wind[B83], SOHO[B84], TIMED[B89]
Description: "Tracking a Solar Storm" is one of the inquiry-based modules on the Student Observation Network (SON) that feature a question to be answered or a problem to be solved. As you answer the question or solve the problem, you will learn how to make your own observations and how to compare them with NASA data. You will discover cutting-edge science with NASA mission data that are easy to use. Each SON module provides tutorials to help you understand the scientific data and step-by-step guides to using the data. In addition, there is background information, including connections to NASA scientists, to help you understand these essential scientific questions.

Lead: Ms. Elaine Lewis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: lewis@mail630.gsfc.nasa.gov. Phone: 301-286-3337.

Contact: Mr. Troy Cline, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: cline@mail630.gsfc.nasa.gov. Phone: 301-286-6606.

Primary URL: <http://son.nasa.gov>

Scientist(s): Mr. Troy Cline NASA Goddard Space Flight Center Greenbelt, MD
Ms. Elaine Lewis NASA Goddard Space Flight Center Greenbelt, MD
Mr. Louis Mayo NASA Goddard Space Flight Center Greenbelt, MD
Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD
Mr. Donald Robinson-Boonstra NASA Goddard Space Flight Center Greenbelt, MD
Dr. James Thieman NASA Goddard Space Flight Center Greenbelt, MD

Partner(s): NASA Headquarters Washington, DC

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Oct 04	28 Sep 05	NASA Explorer Schools—Washington, DC	3157	3535	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	5	0	0
06 Apr 05	09 Apr 05	National Council for the Teachers of Mathematics—Anaheim—CA	50	0	0
18 Jun 05	20 Jun 05	NASA Explorer Schools—Washington, DC	55	0	0

A254. Swift: Glider

Theme(s): Astrophysics
Subject(s): Space Science
Format(s): PDF, Pamphlet
Grade(s): Grades K–12
Msn/Prgm: Swift[B57]
Description: A model airplane designed to resemble the Swift bird conveys information about NASA's Swift Gamma-Ray Burst Explorer mission.

Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000991&mode=full>

A255. Swift: Launch Lithograph

Theme(s): Earth Science
Subject(s): Mathematics, Physical Science, Space Science
Format(s): Lithograph, PDF
Grade(s): Grades 6–8
Msn/Prgm: Swift[B57]
Description: The Swift launch lithograph is a one-page litho that describes the science of NASA's Swift mission, as well as providing an activity for students to do on the back. It was produced for distribution at the Swift launch.
Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000957&mode=full>

A256. Swift: Launch Sticker

Theme(s): Astrophysics
Subject(s): Space Science
Format(s): Web Site
Grade(s): Grades 6–8
Msn/Prgm: Swift[B57]
Description: The Swift launch sticker features a colorful image of the satellite on the front, with text describing the mission on the back.
Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000958&mode=full>

A257. Tactile and Technology Focus Group

Theme(s): Heliophysics, Astrophysics, Planetary
Msn/Prgm: ASO[B33], SEU[B35], DePaul B/F[B37], SERCH B/F[B41]
Description: Due to the increased number of persons working specifically with Earth and space science content to develop tactile graphics and technology programs for persons who are blind/visually impaired, the Special Needs Resource Group (SNRG, pronounced synergy), along with colleagues working in this particular field, created a focus subgroup named the Tactile and Technology Focus Group (TTFG). By forming this group, we hope to eliminate duplication of products, enhance the creation of new products, and centralize products that are and will be created. It is our belief that the coalescing of this highly innovative group and the products they create will provide a quality resource for educators of persons who are blind/visually impaired.
Lead: Ms. Kathryn Guimond, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
E-mail: serch@cofc.edu. Phone: 888-873-9475.
Contact: Ms. Cynthia Atkinson, Southeast Regional Clearinghouse (SERCH), Charleston, SC 29424.
E-mail: exceptional@cofc.edu. Phone: 843-953-7852.

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Oct 04	30 Sep 05	College of Charleston—Charleston, SC	28	0	0

A258. Telescopes from the Ground Up

Theme(s): Astrophysics
Subject(s): Space Science, Technology
Format(s): Web Site
Grade(s): Grades 7–12, Adult/Continuing Education, Community College, General Public, Higher Education
Msn/Prgm: HST[B49]
Description: Telescopes from the Ground Up explores the history of telescopes, from Galileo to NASA's Great Observatories, and highlights the interplay between technological and scientific advances. In this modular activity, milestones in telescope development are highlighted in the 10 sections called eras, with specific examples included in the associated telescope pages. The human component is integrated through the biography pages, which provide a glimpse of the inventors and astronomers behind the telescopes. The science of light and telescopes is presented in the section "Get to the Root of It," which can be used for review, learning the basics, or remediation.
Lead: Ms. Carole L. Rest, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: crest@stsci.edu.
Phone: 410-338-4590.
Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000962&mode=full>

A259. Whirlpool Galaxy (M51) and Companion Galaxy Lithograph

Theme(s): Astrophysics
 Subject(s): Space Science
 Format(s): Lithograph, PDF
 Grade(s): Grades 6–12, Adult/Continuing Education, Community College, General Public
 Msn/Prgm: HST[B49]
 Description: This lithograph features an image from the Hubble Space Telescope showing the Whirlpool Galaxy, also known as M51, and its companion galaxy. The companion galaxy is believed to be responsible for much of the new star birth visible in the spiral arms. A labeled inset shows the regions described in the text.
 Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: <http://teachspacescience.org/cgi-bin/search.plex?catid=10000960&mode=full>

A260. "Windows to the Universe"

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SRT[B28]
 Description: Windows to the Universe is a comprehensive Earth and space science educational Web site that includes interdisciplinary arts and humanities content. The site is composed of over 7,000 Web pages available at three levels of content and in both English and Spanish. The site includes over 80 classroom activities and demonstrations, as well as numerous interactive activities and games and a journal in which users can document their learning. The site offers the opportunity for scientists to collaborate as codevelopers.
 Lead: Dr. Roberta Johnson, University Corporation for Atmospheric Research, Boulder, CO 80305.
 E-mail: rmjohnsn@ucar.edu. Phone: 303-497-2591.

Primary URL: <http://www.windows.ucar.edu>

Secondary

URL: <http://www.windows.ucar.edu/spanish>

Scientist(s): Dr. Roberta Johnson University Corporation for Atmospheric Research Boulder, CO

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	University Corporation for Atmospheric Research—Boulder, CO	800	800	9960775

A261. "You Are Here: Exploring Your Universe from Inner to Outer Space"

Theme(s): Heliophysics, Astrophysics
 Msn/Prgm: SEU[B35], SECEF[B36], GLAST[B47], Swift[B57], XMM[B69]
 Description: The subject matter taught in the six-session "You Are Here" course covers the size and scale of the universe surrounding us. Students will explore objects from human scale to the infinite using multiwavelength imagery. They will write out their cosmic address in the universe, thus gaining a better understanding of where they are in our world, solar system, galaxy, and beyond. All of this is done in six sessions; each session covers a different size range of the universe.
 Lead: Ms. Sarah Silva, Sonoma State University, Rohnert Park, CA 94928. E-mail: sarah@universe.sonoma.edu.
 Phone: 707-664-2244.

Primary URL: <http://epo.sonoma.edu/youarehere/>

Secondary

URL: <http://epo.sonoma.edu/youarehere/activities.html>

Scientist(s): Dr. Lynn Cominsky Sonoma State University Rohnert Park, CA
 Mr. Logan Hill Sonoma State University Rohnert Park, CA
 Dr. Philip Plait Sonoma State University Rohnert Park, CA
 Ms. Sarah Silva Sonoma State University Rohnert Park, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 May 05	27 May 05	Roseland University Prep High School— Santa Rosa, CA	79	0	0
21 Jun 05	26 Jul 05	Valley of the Moon Boys and Girls Club— Sonoma, CA	17	0	0

Student Involvement

A262. 3D-VIEW (Virtual Interactive Environmental Worlds): Student Involvement

Theme(s): Earth Science
 Msn/Prgm: 3D-VIEW[B25]
 Description: Student involvement is ultimately the essential activity of the project. At some point, students of over 1,000 teachers will be utilizing this program. In 2005, 430 students were involved in the pilot phase, in which students worked for at least 1 month in the classroom on Project 3D-VIEW activities.
 Lead: Mr. Glen Schuster, U.S. Satellite Laboratory, Rye, NY 10580. E-mail: gschuster@us-satellite.net.
 Phone: 914-921-5920.

Primary URL: <http://www.3dview.org/>

Partner(s): Ann Street School

Newark, NJ

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Feb 05	30 Jun 05	Ann Street School—Newark, NJ	430	0	0

A263. ACE Classroom Presentations

Theme(s): Heliophysics

Msn/Prgm: ACE[B73]

Description: Scientists working on the Advanced Composition Explorer (ACE) travel to schools and other venues throughout the year to present lectures and workshops for students on science and technology topics associated with ACE. These talks range from a Career Day presentation to a kindergarten class to hands-on workshops for high school students on solar magnetism and the interstellar medium.

Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://www.srl.caltech.edu/ACE/>

Scientist(s): Dr. Dennis Haggerty Johns Hopkins University Applied Physics

Laboratory

Laurel, MD

Dr. Harald Kucharek University of New Hampshire

Durham, NH

Dr. Eberhard Moebius University of New Hampshire

Durham, NH

Dr. Mark Popecki University of New Hampshire

Durham, NH

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 Nov 04	17 Nov 04	Phelps Luck Elementary School—Columbia, MD—	125	0	0
20 May 05	20 May 05	Moharimet Elementary School—Dover, NH	64	0	0

A264. Aeronautical Exposition for Students

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: NASA Ames Research Center hosted an annual 2-day program of field trips for students from area schools. Presentations emphasized aeronautics, space exploration, science, engineering, and technology careers for elementary and middle school students. The focus of the program is on outreach to schools with students who are underrepresented in technical fields.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Primary URL: <http://education.arc.nasa.gov>

Scientist(s):			
Dr. Dana Backman	NASA Ames Research Center	Moffett Field, CA	
Ms. Becky Brondos	NASA Ames Research Center	Moffett Field, CA	
Mr. Rich Dragonajtys	NASA Ames Research Center	Moffett Field, CA	
Ms. Franziska Harms	Universities Space Research Association	Moffett Field, CA	
Ms. Bree Holmboe	Stratospheric Observatory For Infrared Astronomy (SOFIA)	Moffett Field, CA	
Ms. Tara Hunter	NASA Ames Research Center	Moffett Field, CA	
Ms. Veronique Koken	NASA Ames Research Center	Moffett Field, CA	
Ms. Darlene Mendoza	Astronomical Society of the Pacific	San Francisco, CA	
Mr. Allan Meyer	Universities Space Research Association	Moffett Field, CA	
Mr. Burt Rosenthal	NASA Ames Research Center	Moffett Field, CA	
Ms. Maureen Savage	Universities Space Research Association	Moffett Field, CA	
Ms. Hilary Smith	Stratospheric Observatory For Infrared Astronomy (SOFIA)	Moffett Field, CA	
Mr. Eric Wang	Universities Space Research Association	Moffett Field, CA	
Dr. Juergen Wolf	NASA Ames Research Center	Moffett Field, CA	

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
27 Apr 05	30 Apr 05	AeroExpo V—Moffett Field, CA	0	3500	0

A265. Austin Science Fun Day

Theme(s): Planetary

Msn/Prgm: GRACE[B4]

Description: Students from the Texas School for the Blind and Visually Impaired (TSBVI) became the teachers during UT Explore Science Fun Day. The students from TSBVI used space-related activities that they learned while attending a special program in collaboration with the Texas Space Grant Consortium, the University of Texas Astronomy Department, and the Gravity Recovery and Climate Experiment mission. The students conducted activities for 750 other students while providing information to almost 3,000 attendees.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu. Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Partner(s):	Texas State School for the Blind			Austin, TX	
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Mar 05	05 Mar 05	University of Texas at Austin—Austin, TX	0	3000	0

A266. Big Explosions and Strong Gravity

Theme(s):	Astrophysics				
Msn/Prgm:	CXO[B44], Constellation-X[B46], HEASARC[B65]				
Description:	Big Explosions and Strong Gravity is a 1-day patch program for the Girl Scouts of America, designed to give participants a day of exploration of supernovae and black holes. Junior-high-age Girl Scouts and their Scout Leaders attend sessions about the origin of the chemical elements, spectral analysis, supernovae, and black holes. They are given an opportunity to talk directly with professional scientists about careers in astronomy and other topics.				
Lead:	Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: lochner@xeric.gsfc.nasa.gov . Phone: 301-286-9711.				
Primary URL:	http://www.pha.jhu.edu/~annh/PATCH/				
Scientist(s):	Dr. Ann Hornschemeir	Johns Hopkins University	Baltimore, MD		
	Dr. Jeff Livas	NASA Goddard Space Flight Center	Greenbelt, MD		
	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD		
	Ms. Barbara Mattson	NASA Goddard Space Flight Center	Greenbelt, MD		
	Ms. Sara Mitchell	NASA Goddard Space Flight Center	Greenbelt, MD		
	Dr. Jennifer Scott	Space Telescope Science Institute	Baltimore, MD		
	Dr. Edward Wollack	NASA Goddard Space Flight Center	Greenbelt, MD		
Partner(s):	Girl Scouts of Central Maryland		Baltimore, MD		
	Johns Hopkins University		Baltimore, MD		

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Jun 05	11 Jun 05	Johns Hopkins University—Baltimore, MD	92	0	0

A267. Cassini: Classroom Visits

Theme(s):	Planetary				
Msn/Prgm:	Cassini-Huygens Probe[B94]				
Description:	Members of the Cassini team visited classrooms to share the science discoveries of the mission.				
Lead:	Mr. Arthur Hammon, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: ahammon@jpl.nasa.gov . Phone: 818-393-4702.				
Contact:	Ms. Shannon McConnell, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shannon.mcconnell@jpl.nasa.gov . Phone: 818-393-5815.				
Primary URL:	http://saturn.jpl.nasa.gov/education/edu-prof-dev.cfm				
Secondary URL:	http://saturn.jpl.nasa.gov/education/edu-classroom.cfm				
Scientist(s):	Dr. Claudia Alexander	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Richard Alley	Pennsylvania State University	University Park, PA		
	Dr. David J. Atkinson	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Andrew Cheng	Johns Hopkins University Applied Physics Laboratory	Laurel, MD		
	Dr. Chris Chyba	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA		
	Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Craig De Forest	Southwest Research Institute	Boulder, CO		
	Dr. Scott Edgington	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. James Farquhar	University of Maryland	College Park, MD		
	Dr. Kathryn Flanagan	Massachusetts Institute of Technology	Cambridge, MA		
	Dr. Greg Fletcher	University of Michigan	Ann Arbor, MI		
	Mr. Lloyd French	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Jim Garvin	NASA Headquarters Science Mission Directorate	Washington, DC		
	Dr. Andrea Ghez	University of California, San Diego	La Jolla, CA		
	Dr. Matt Golombek	Smithsonian National Museum of Natural History	Washington, DC		
	Dr. Heidi Hammel	Space Science Institute	Boulder, CO		
	Dr. Randy Herrera	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. George Hospodarsky	University of Iowa	Iowa City, IA		
	Ms. Jane Houston Jones	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Torrence Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Mr. Charles Kirby	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Therese Kucera	NASA Goddard Space Flight Center	Greenbelt, MD		
	Dr. Wayne Lee	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Mr. Randell Lindemann	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Mr. Rob Manning	NASA Jet Propulsion Laboratory	Pasadena, CA		
	Dr. Geoff Marcy	San Francisco State University	San Francisco, CA		

Ms. Shannon McConnell	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Kenneth Nealson	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Tom Nolan	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Brian Paczkowski	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. William Patzert	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Art Poland	George Mason University	Fairfax, VA
Dr. Andrea Prestwich	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Dr. Cynthia Rosensweig	NASA Goddard Institute for Space Studies	New York, NY
Mr. Tony Spear	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Dave Spencer	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Lisa Tatge	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Michelle Thaller	California Institute of Technology (Caltech)	Pasadena, CA
Dr. Barbara Thompson	NASA Goddard Space Flight Center	Greenbelt, MD
Ms. Julie Webster	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Randii Wessen	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Mona Witkowski	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Oct 04	10 Oct 04	University of Iowa—Iowa City, IA	70	0	0
05 Jan 05	05 Jan 05	Ladera Elementary School— Thousand Oaks, CA	65	0	0
12 Jan 05	12 Jan 05	San Dimas High School—San Dimas, CA	10	0	0
25 Jan 05	25 Jan 05	Buckley School—Sherman Oaks, CA	80	0	0
28 Jan 05	28 Jan 05	Memorial High School—San Antonio, TX	164	0	0
14 Feb 05	15 Feb 05	Santa Fe Middle School—Monrovia, CA	405	0	0
15 Feb 05	15 Feb 05	Santa Fe Middle School—Monrovia, CA	150	0	0
21 Mar 05	21 Mar 05	Bonita High School—La Verne, CA	1130	0	0
22 Mar 05	23 Mar 05	Barnhart School—Arcadia, CA	167	0	0
23 Mar 05	23 Mar 05	Norma Coombs Alternative School— Pasadena, CA	63	0	0
28 Mar 05	28 Mar 05	Van Buren Elementary School— Cedar Rapids, IA	63	0	0
07 Apr 05	08 Apr 05	Montana State University—Bozeman, MT	100	0	0
12 Apr 05	12 Apr 05	Circle of Children—Santa Monica, CA	47	0	0
14 Apr 05	14 Apr 05	George Long Elementary School— Grass Lake, MI	150	0	0
20 Apr 05	20 Apr 05	Mesa Union Elementary School—Somis, CA	312	0	0
22 Apr 05	22 Apr 05	Villanova University—Villanova, PA	40	0	0
29 Apr 05	29 Apr 05	University of Idaho—Moscow, ID	650	0	0
20 May 05	20 May 05	Los Angeles Unified School District— Los Angeles, CA	35	0	0
24 May 05	24 May 05	Temple City High School—Temple City, CA	154	0	0
26 May 05	26 May 05	Coliseum Street Elementary School— Los Angeles, CA	425	0	0
14 Jun 05	14 Jun 05	Wiley Canyon Elementary School—Newhall, CA	60	0	0
17 Jun 05	17 Jun 05	Aldama Elementary School—Los Angeles, CA	350	0	0
06 Jul 05	06 Jul 05	Riverside Elementary School—Riverside, IA	24	0	0

A268. Challenger Learning Center Space Camp

Theme(s): Planetary

Msn/Prgm: MARSSB[B39]

Description: The Challenger Learning Center (CLC) dispersed materials to middle and high school students attending public and private schools in the region, along with their teachers. CLC also gave the materials to the teachers who attended the CLC teacher training on site and the students attending the summer Space Camps. About 200 4th-7th-grade students from West Virginia, Pennsylvania, and Ohio participated in activities centered on Stardust and Deep Impact missions. The students made a dirty snowball using dry ice, dirt, and ammonia; tested their knowledge about comets using other materials; and watched a video about the Stardust mission. Outcomes and followups: introduced CLC to other resources available through the SMD network that can enhance their summer camps, teacher workshops, and other outreach programs; provided Deep Impact materials for aerospace education specialists and "Bring Your Daughter to Work Day."

Lead: Ms. Annie Morgan, Challenger Learning Center of Wheeling, Wheeling, WV 26003-6295.

E-mail: amorgan@cet.edu. Phone: 304-243-2386.

Primary URL: <http://www.wju.edu/clc/>

Secondary

URL: <http://marssb.cet.edu>

Scientist(s): Dr. Laurie Ruberg

Wheeling Jesuit University

Wheeling, WV

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
03 Jan 05	03 Jan 05	Challenger Learning Center of Wheeling— Wheeling, WV	30	1	0
01 Feb 05	01 Feb 05	Challenger Learning Center of Wheeling— Wheeling, WV	30	1	0
20 Jun 05	20 Jun 05	Challenger Learning Center of Wheeling— Wheeling, WV	36	1	0
22 Jun 05	22 Jun 05	Challenger Learning Center of Wheeling— Wheeling, WV	36	1	0
24 Jun 05	24 Jun 05	Challenger Learning Center of Wheeling— Wheeling, WV	36	1	0
28 Jun 05	28 Jun 05	Challenger Learning Center of Wheeling— Wheeling, WV	36	1	0
29 Jun 05	29 Jun 05	Challenger Learning Center of Wheeling— Wheeling, WV	36	1	0

A269. Chandra X-ray Center: Presentations and Workshops for Students

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: Members of the Chandra X-ray Center staff, scientists working with Chandra observations, and Chandra Resource Agents visited classrooms and other education-related settings to inform students about the Chandra mission and other NASA space science initiatives. They shared the latest exciting science results and talked about their own research interests. They also participated in the development of materials for museum/planetarium exhibits and educational programs for broadcasting. They advised and contributed to the development of informal education materials that incorporated information about the Chandra science and mission.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

Contact: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

Primary URL: <http://chandra.harvard.edu>

Secondary URL: <http://science.nasa.gov>

Scientist(s):	Mr. Gary Glick	Tufts University	Medford, MA
	Dr. John Kolena	North Carolina School of Science and Mathematics	Durham, NC
	Ms. Jan Malle	Point Park College	Pittsburgh, PA
	Dr. David Plummer	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. Paul Stengel	Chandra X-ray Center	Cambridge, MA
	Dr. Saku Vrtilek	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Bradley Wargelin	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. Linder Winter	Tufts University	Medford, MA
	Ms. Donna Young	Tufts University	Medford, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
23 Oct 04	23 Oct 04	Estrella Mountain Elementary School— Goodyear, AZ	39	0	0
10 Mar 05	23 Mar 05	Hofstra/Brookhaven National Laboratory Collegiate Science and Technology Entry Program (CSTEP)—Upton, NY	108	0	0
11 Mar 05	11 Mar 05	Thoreau School—Concord, MA	19	0	0
12 Mar 05	12 Mar 05	Duke University—Durham, NC	30	0	0
05 May 05	05 May 05	Sacopee High School—Hiram, M	64	0	0
10 May 05	10 May 05	Fox Hill School—Burlington, MA	23	0	0
20 May 05	21 May 05	Science Olympiad National Tournament 2005— Urbana—IL	120	0	0
02 Aug 05	02 Aug 05	Harvard University—Cambridge, MA	33	0	0

A270. Cosmic Hot Interstellar Plasma Spectrometer (CHIPS): Classroom Visits and Student Support

Theme(s): Astrophysics

Msn/Prgm: CHIPS[B54]

Description: Scientists and E/PO support staff of the CHIPS mission, operated at the University of California (UC) Berkeley, carry out activities to engage directly with students. Such activities include classroom visits by scientists and E/PO personnel, student visits to UC Berkeley facilities, and visits to family science nights at local schools.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.

Phone: 510-643-7273.

Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu.

Phone: 510-643-2178.

Primary URL: http://cse.ssl.berkeley.edu/chips_epo/

Scientist(s): Dr. Bryan Mendez University of California, Berkeley Berkeley, CA
 Mr. Igor Ruderman University of California, Berkeley Berkeley, CA
 Ms. Sarah Silva Sonoma State University Rohnert Park, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 Dec 04	09 Dec 04	Tahoe Valley Elementary School— South Lake Tahoe, CA	368	0	0
16 Mar 05	16 Mar 05	Joaquin Miller Elementary School— Oakland, CA	0	100	0
15 Jun 05	15 Jun 05	Joaquin Miller Elementary School— Oakland, CA	31	0	0

A271. Einstein and GP-B in the Classroom

Theme(s): Astrophysics

Msn/Prgm: GP-B[B48]

Description: Classroom presentations to students in the San Francisco Bay area include interactive demonstrations that tell the story of Einstein's theory of curved spacetime and how Gravity Probe B (GP-B) is attempting to test his theory. All students receive 3-4 educational products.

Lead: Ms. Shannon Range, Stanford University, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.

Primary URL: <http://einstein.stanford.edu>

Scientist(s): Mr. Ken Bower Stanford University Stanford, CA
 Dr. Dave Hipkins Stanford University Stanford, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Oct 04	07 Oct 04	Saratoga High School—Saratoga, CA	62	0	0
12 Oct 04	12 Oct 04	Palo Alto Prep School—Palo Alto, CA	27	0	0
07 Dec 04	07 Dec 04	Crystal Springs Middle School— Hillsborough, CA	61	0	0
07 Jan 05	07 Jan 05	Experimental Aircraft Association— Livermore, CA	0	60	0
20 Jan 05	20 Jan 05	Girls' Middle School, The—Mountain View, CA	52	0	0
05 Feb 05	05 Feb 05	Woodside International School—Woodside, CA	17	0	0
02 Mar 05	02 Mar 05	Notre Dame High School of San Jose— San Jose, CA	31	0	0
12 Mar 05	12 Mar 05	Harker School of San Jose—San Jose, CA	7	0	0
14 Mar 05	14 Mar 05	Archbishop Riordan High School— San Francisco, CA	102	0	0
17 Mar 05	17 Mar 05	Saratoga High School—Saratoga, CA	36	0	0
18 Mar 05	18 Mar 05	Archbishop Riordan High School— San Francisco, CA	57	0	0
15 Apr 05	15 Apr 05	Creekside Middle School—Castro Valley, CA	105	0	0
01 May 05	01 May 05	Los Gatos High School—Los Gatos, CA	102	0	0
02 May 05	02 May 05	Los Gatos High School—Los Gatos, CA	57	0	0
19 May 05	19 May 05	Bridgemont High School—Daly City, CA	16	0	0

A272. "Exploring the Extreme Universe!" Student Presentations

Theme(s): Astrophysics

Msn/Prgm: GLAST[B47]

Description: Most of the GLAST student presentations are in the Tesla Coil show, in which faculty and staff from the Santa Cruz Institute for Particle Physics (SCIPP) perform shocking feats utilizing electromagnetism and discuss the science objectives of the GLAST mission: the study of gamma-ray emission from active galaxies, gamma-ray bursts, and other exotic objects. Other GLAST student presentations are performed by GLAST Educator Ambassadors and SSU E/PO professionals.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
 Phone: 707-664-2655.

Primary URL: <http://glast.sonoma.edu>

Secondary

URL: <http://scipp.ucsc.edu/outreach/tesla/teslacoil/index.html>

Scientist(s): Dr. Lynn Cominsky Sonoma State University Rohnert Park, CA
 Ms. Teena Della Terry Fox Secondary School Port Coquitlam, Canada
 Mr. Sean Greenwalt Sonoma State University Rohnert Park, CA
 Dr. Greg Madejski Stanford University Stanford, CA
 Dr. Philip Plait Sonoma State University Rohnert Park, CA
 Dr. Hartmut Sadrozinski University of California, Santa Cruz Santa Cruz, CA
 Ms. Sarah Silva Sonoma State University Rohnert Park, CA
 Ms. Pamela Whiffen Palo Verde Middle School Phoenix, AZ
 Partner(s): University of California, Santa Cruz Santa Cruz, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
06 Oct 04	06 Oct 04	Terry Fox Secondary School— Port Coquitlam, Canada	56	0	0
10 Oct 04	10 Oct 04	Valley Catholic School—Beaverton, OR	50	0	0
15 Oct 04	15 Oct 04	Stanford Linear Accelerator Center— Menlo Park, CA	15	2	0
26 Oct 04	26 Oct 04	Harbor High School—Santa Cruz, CA	50	0	0
09 Nov 04	09 Nov 04	Crittenden Middle School—Mountain View, CA	100	0	0
03 Mar 05	03 Mar 05	Santa Teresa High School—San Jose, CA	76	0	0
05 Mar 05	05 Mar 05	Expanding Your Horizons—Sonoma County Conference—Santa Rosa, CA	14	0	0
05 Mar 05	05 Mar 05	Sally Ride Science Festival—Tempe, AZ	60	0	0
08 Apr 05	10 Apr 05	Balloon Fest 2005—Paso Robles, CA	80	0	0
19 Apr 05	19 Apr 05	Aptos High School—Aptos, CA	56	0	0
29 Apr 05	29 Apr 05	Freedom High School—Oakley, CA	301	0	0
17 May 05	17 May 05	Woodside Priory High School— Portola Valley, CA	0	101	0
20 May 05	20 May 05	Natomas High School—Sacramento, CA	101	0	0
24 May 05	24 May 05	Graham Middle School—Mountain View, CA	151	0	0
03 Jun 05	03 Jun 05	University of California, Santa Cruz— Santa Cruz, CA	151	0	0
05 Jul 05	05 Aug 05	Stanford Linear Accelerator Center— Menlo Park, CA	8	0	0
20 Jul 05	20 Jul 05	University of California, Santa Cruz— Santa Cruz, CA	152	0	0
23 Jul 05	23 Jul 05	Panorama Park—Coquitlam, Canada	22	0	0
23 Sep 05	23 Sep 05	Sonoma State University—Rohnert Park, CA	60	0	0
28 Sep 05	28 Sep 05	University of British Columbia— Vancouver, Canada	46	0	0

A273. "Exploring the Hot Universe with the Coolest Satellite": Student Workshop

Theme(s): Astrophysics

Msn/Prgm: Suzaku[B68]

Description: This student workshop introduces high school and undergraduate students to the Suzaku (formerly known as Astro-E2) satellite and the science, technology, and collaborative efforts involved in the mission. Using video clips from the mission's educational video, the workshop engages participants in discussions and activities regarding x-ray spectroscopy, x-ray optics, and international collaborations.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://astroe2lc.gsfc.nasa.gov>

Scientist(s):	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Sara Mitchell	NASA Goddard Space Flight Center	Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 May 05	17 May 05	NASA Goddard Space Flight Center— Greenbelt, MD	24	0	0
08 Jun 05	08 Jun 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	12	0

A274. FAST: Classroom Visits and Student Support

Theme(s): Heliophysics

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74]

Description: Every year, Fast Auroral SnapshoT (FAST) scientists visit K–12 classrooms around the country to talk about FAST science, describe what it is like to be a scientist, and provide basic student support as a teacher's aid. FAST scientists also discuss what it is like to be a woman in science and the difficulties encountered along the way. Through these activities, we educate students about the aurora and auroral science, reach underserved students, provide support to teachers, and introduce students to NASA scientists.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

Contact: Dr. Laura Peticolas, University of California, Berkeley, Berkeley, CA 94720. E-mail: laura@ssl.berkeley.edu. Phone: 510-643-7273.

Primary URL: http://cse.ssl.berkeley.edu/fast_epo

Secondary

URL: <http://sprg.ssl.berkeley.edu/fast>

Scientist(s):	Dr. John Bonnell	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA

Mr. Igor Ruderman
Ms. Jackie Wong

University of California, Berkeley
University of California, Berkeley

Berkeley, CA
Berkeley, CA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	02 Feb 05	02 Feb 05	East Bay Conservation Corps Charter School— Oakland, CA	21	0	0
	28 Apr 05	28 Apr 05	University of California, Berkeley—Berkeley, CA	53	0	0

A275. GAVRT: Classroom Implementation-Cassini Mission

Theme(s): Planetary

Msn/Prgm: Cassini-Huygens Probe[B94], DSMS[B114]

Description: Continuing the GAVRT commitment to involve students in real science and, where possible, to include NASA missions, students are currently taking data on the planet Saturn for the Cassini mission. This is a continuation of observations made by students while the Cassini spacecraft flew by Jupiter. Currently, students are observing Saturn using a 34-meter radio telescope and calculating the approximate thermal temperature of Saturn's atmosphere. A majority of Saturn's blackbody emission is at infrared and radio wavelengths, so students use radio astronomy to gather these data and report them to the Cassini mission.

Contact: Ms. Shirley Wolff, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shirley.e.wolff@jpl.nasa.gov. Phone: 818-354-4069.

Primary URL: <http://gavrt.org>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Partner(s): Lewis Center for Educational Research

Apple Valley, CA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Nov 04	15 Feb 05	Kubasaki High School—DoDEA FPO, Japan	29	0	0
	21 Nov 04	13 Dec 04	Northridge Magnet School—Moreno Valley, CA	59	0	0
	16 Dec 04	07 Jan 05	Opelika Middle School—Opelika, AL	101	0	0
	18 Dec 04	07 Jan 05	Sanford Middle School—Opelika, AL	17	0	0
	18 Dec 04	07 Jan 05	Strong Vincent High School—Erie, PA	17	0	0
	03 Jan 05	13 Jan 05	Livorna High School—Livorna, Italy	25	0	0
	03 Jan 05	14 Jan 05	Meadowdale High School—Lynnwood, WA	19	0	0
	03 Jan 05	15 Jan 05	Brewton Middle School—Brewton, AL	21	0	0
	03 Jan 05	19 Jan 05	Lester Middle School—DoDEA FPO, Philippines	51	0	0
	04 Jan 05	20 Jan 05	Geissen Middle School—Geissen, Germany	29	0	0
	05 Jan 05	27 Jan 05	Lewis Center for Educational Research— Apple Valley, CA	116	0	0
	25 Jan 05	15 Feb 05	Seoul American High School—APO AP, South Korea	21	0	0
	31 Jan 05	21 Feb 05	Ballard Junior High School—Huxley, IA	103	0	0

A276. GAVRT: Classroom Implementation-Jupiter Quest

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: GAVRT Project (Goldstone Apple Valley Radio Telescope) offers a unique opportunity for students in grades K through 12 not only to learn about science through radio astronomy, but to actually do it. Students conduct remotely controlled radio astronomy observations using a 34-meter-diameter antenna located at the Goldstone Deep Space Communications Complex. Students use computers to record extremely faint radio waves collected by the radio telescope, then analyze the data. Scientists at JPL and other research institutions ultimately validate and incorporate the data into their research. Several observation options are available to students in the GAVRT Project, including Jupiter Quest, in which they collect data on the planet's atmospheric temperature and study the variations in the radiation belts surrounding Jupiter. The project is curriculum-based, meeting national and State science standards.

Lead: Dr. Michael Klein, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: michael.j.klein@jpl.nasa.gov. Phone: 818-354-7132.

Primary URL: <http://www.lcer.org/gavrt>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Partner(s): Lewis Center for Educational Research

Apple Valley, CA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	25 Oct 04	15 Nov 04	Landstuhl Elementary/Middle School— Landstuhl, Germany	94	0	0
	03 Jan 05	20 Jan 05	Edgran High School—Misawa, Japan	134	0	0
	03 Jan 05	20 Jan 05	Seoul American Middle School— DoDEA APO, South Korea	102	0	0
	03 Jan 05	31 Jan 05	Maranatha Christian School—San Diego, CA	45	0	0
	19 Jan 05	10 Feb 05	Ballard Junior High School—Huxley, IA	103	0	0

02 Feb 05	23 Feb 05	Osan American High School— DoDEA APO, South Korea	16	0	0
02 Feb 05	24 Feb 05	Canton Country Day School—Canton, OH	9	0	0
03 Feb 05	24 Feb 05	Patch High School—Stuttgart, Germany	5	0	0
14 Feb 05	07 Mar 05	Pusan American High School— DoDEA APO, South Korea	15	0	0
14 Feb 05	08 Mar 05	Mannheim High School—APO, DF, Germany	47	0	0
01 Mar 05	20 Mar 05	Lewis Center for Educational Research— Apple Valley, CA	22	0	0
07 Mar 05	28 Mar 05	Lester Middle School—DoDEA FPO, Philippines	21	0	0
07 Mar 05	28 Mar 05	Willard Elementary School—Pasadena, CA	69	0	0
01 Apr 05	22 Apr 05	Our Lady Queen of Peace School—Clute, TX	34	0	0
01 Apr 05	25 Apr 05	Zama High School—DoDEA APO, Japan	81	0	0
04 Apr 05	28 Apr 05	St. Mary's School—Medford, OR	35	0	0
10 Apr 05	23 May 05	Norman High School North—Norman, OK	88	0	0
14 Apr 05	05 May 05	Roland Park Country School—Baltimore, MD	25	0	0
26 Apr 05	28 May 05	Ramstein Middle School—Ramstein, Germany	121	0	0
27 Apr 05	10 May 05	Brussels American School—Brussels, Belgium	24	0	0
01 May 05	18 May 05	Seoul American High School—APO AP, South Korea	41	0	0
02 May 05	23 May 05	Brewster Middle School—Camp Lejeune, NC	8	0	0

A277. GAVRT: Classroom Implementation-Quasar Variability Study

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: Students experience real science when they conduct remotely controlled radio astronomy observations using a 34-meter-diameter antenna previously part of NASA's Deep Space Network. Students use computers to record extremely faint radio waves collected by the radio telescope, then analyze the data. One of the curriculum-based options available to students in the GAVRT (Goldstone Apple Valley Radio Telescope) Project is the Quasar Variability Study, in which they observe and measure variations in the radio brightness of multiple distant quasars. Once analyzed by the students, data are forwarded to a Principal Investigator in Australia for validation and incorporation into his research. GAVRT curriculum meets national and State science standards and is available for grades 1–12.

Lead: Dr. Michael Klein, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: michael.j.klein@jpl.nasa.gov. Phone: 818-354-7132.

Primary URL: <http://www.lcer.org/gavrt>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Partner(s): Lewis Center for Educational Research

Apple Valley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Oct 04	05 Nov 04	Aviano Middle School—Aviano, Italy	101	0	0
08 Nov 04	29 Nov 04	St. Mary's School—Medford, OR	69	0	0
19 Jan 05	15 Feb 05	Hohenfels American High School— Hohenfels, Germany	30	0	0
21 Jan 05	11 Feb 05	Maranatha Christian School—San Diego, CA	11	0	0
01 Feb 05	22 Feb 05	Seoul American High School— APO AP, South Korea	26	0	0
04 Feb 05	25 Feb 05	Lajes High School—Lajes, Portugal	36	0	0
07 Feb 05	28 Feb 05	Magnificat High School—Rocky River, OH	16	0	0
08 Feb 05	01 Mar 05	Kaiserslautern American High School— Kaiserslautern, Germany	5	0	0
09 Feb 05	14 Mar 05	Lewis Center for Educational Research— Apple Valley, CA	18	0	0
14 Feb 05	07 Mar 05	Roland Park Country School—Baltimore, MD	25	0	0
23 Feb 05	16 Mar 05	Opelika Middle School—Opelika, AL	56	0	0
23 Feb 05	16 Mar 05	Redlands High School—Redlands, CA	28	0	0
01 Mar 05	22 Mar 05	Baumholder American High School— Baumholder, Germany	86	0	0
07 Mar 05	28 Mar 05	Willard Elementary School—Pasadena, CA	11	0	0
01 Apr 05	08 Apr 05	Lewis Center for Educational Research— Apple Valley, CA	31	0	0
01 Apr 05	18 Apr 05	Middletown High School—Middletown, DE	16	0	0
01 Apr 05	19 Apr 05	Taegu American School—Taegu, South Korea	6	0	0
04 Apr 05	29 Apr 05	Lewis Center for Educational Research— Apple Valley, CA	41	0	0
11 Apr 05	09 May 05	Chinle High School—Chinle, AZ	95	0	0
11 Apr 05	18 May 05	Lewis Center for Educational Research— Apple Valley, CA	105	0	0

12 Apr 05	29 Apr 05	Des Lacs Burlington High School— Des Lacs, ND	88	0	0
26 Apr 05	17 May 05	Norman High School North—Norman, OK	22	0	0
01 May 05	19 May 05	Our Lady Queen of Peace School—Clute, TX	18	0	0
02 May 05	25 May 05	Bitburg Middle School—Bitburg, Germany	12	0	0
06 May 05	26 May 05	Menwith Hill School— Menwith Hill, United Kingdom	26	0	0
09 May 05	01 Jun 05	McPerry High School—Iwakuni, Japan	71	0	0
23 May 05	01 Jun 05	Lester Middle School—DoDEA FPO, Philippines	17	0	0
23 May 05	15 Jun 05	Lakenheath Middle School— Lakenheath, United Kingdom	121	0	0
27 May 05	12 Jun 05	Notre Dame Academy—Los Angeles, CA	16	0	0

A278. GAVRT: Classroom Implementation-Uranus

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: The GAVRT (Goldstone Apple Valley Radio Telescope) Project provides students with an opportunity to learn about science by doing radio astronomy. Students use a 34-meter-diameter antenna to conduct remotely controlled radio astronomy observations and record extremely faint radio waves collected by the radio telescope. One of the classroom science options available to students in the GAVRT Project is the study of Uranus. Students study Uranus to learn about its extremely long seasons—one rotation of the Sun takes 84 years. They measured changes in atmospheric temperatures that appear to be related to the seasons on Uranus and report their findings to scientists at NASA JPL and at the Space Science Institute in Colorado. A curriculum meeting national and State science standards supports the campaign and is available for grades K–12.

Contact: Ms. Shirley Wolff, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shirley.e.wolff@jpl.nasa.gov. Phone: 818-354-4069.

Primary URL: <http://www.lcer.org/gavrt>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Partner(s): Lewis Center for Educational Research

Apple Valley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
12 Oct 04	03 Nov 04	Fort Knox High School—Fort Knox, KY	12	0	0
16 Nov 04	08 Dec 04	Kadena Middle School— Kadena Air Base, Japan	81	0	0
01 Apr 05	08 Apr 05	Lewis Center for Educational Research— Apple Valley, CA	34	0	0
01 Apr 05	19 May 05	Ramey School—Aguadilla, Puerto Rico	81	0	0
02 May 05	20 May 05	Baker High School—Mobile, AL	6	0	0
02 May 05	26 May 05	Brewton Middle School—Brewton, AL	87	0	0
02 May 05	26 May 05	Rocklin Academy—Rocklin, CA	27	0	0
09 May 05	31 May 05	Lester Middle School—DoDEA FPO, Philippines	32	0	0
13 May 05	03 Jun 05	Columbia Middle School—Adelanto, CA	251	0	0
13 May 05	03 Jun 05	Hohenfels American High School— Hohenfels, Germany	22	0	0

A279. GAVRT: Scientist/Student Teleconferences

Theme(s): Planetary

Msn/Prgm: Cassini-Huygens Probe[B94], DSMS[B114]

Description: Students collecting data for scientists in the Goldstone Apple Valley Radio Telescope (GAVRT) Project occasionally have the opportunity to interact with those Principal Investigators and/or other scientists through teleconferences. Usually this activity coincides with a mission event or some other specific, related milestone. Students from many schools participate, and some are selected by their teachers to ask questions, or the class formulates questions prior to the telecon.

Lead: Dr. Mark Hofstadter, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. Phone: 818-354-6160.

Primary URL: <http://gavrt.org>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/gavrt>

Scientist(s): Dr. Mark Hofstadter NASA Jet Propulsion Laboratory
Mr. David MacLaren Lewis Center for Educational Research
Ms. Pat Reeder Lewis Center for Educational Research
Mr. Shaun Standley NASA Jet Propulsion Laboratory

Pasadena, CA
Apple Valley, CA
Apple Valley, CA
Pasadena, CA
Apple Valley, CA

Partner(s): Lewis Center for Educational Research

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
26 May 05	26 May 05	National Radio Astronomy Observatory— Socorro, NM	90	0	0

08 Sep 05	08 Sep 05	Menwith Hill School— Menwith Hill, United Kingdom	52	0	0
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A280. GLOBE Contrail Team

Theme(s):	Earth Science
Msn/Prgm:	GLOBE[B17]
Description:	As part of the overall GLOBE program, the GLOBE contrail team seeks to obtain student observations and reports of contrails. The student data are collected and compared to contrail prediction models using numerical weather prediction techniques and will also be used to assess contrail detection in satellite imagery. The GLOBE contrail team has developed its own Web site to provide background and materials to help students and the public understand this phenomenon and its potential impact on our planet. The team also supports student projects relating to contrail studies.
Lead:	Dr. Lin Chambers, NASA Langley Research Center, Hampton, VA 23681. E-mail: l.h.chambers@larc.nasa.gov . Phone: 757-864-4371.
Primary URL:	http://asd-www.larc.nasa.gov/GLOBE
Secondary URL:	http://www.globe.gov

A281. Goldstone Communications Complex: Educational Activities

Theme(s):	Planetary				
Msn/Prgm:	DSMS[B114]				
Description:	The Goldstone Educational Activities program takes the antennas and missions of the Deep Space Network into the classroom by means of multimedia presentations and age-appropriate activities such as star charts, word searches, dot-to-dot pictures, and coloring sheets.				
Contact:	Ms. Marie Massey, Goldstone Deep Space Communications Complex, Fort Irwin, CA 92310. E-mail: <i>Marie.massey@csconline.com</i> . Phone: 760-255-8687.				
Primary URL:	<i>http://deepspace.jpl.nasa.gov/dsn</i>				
Scientist(s):	Ms. Carmen Cortinas	Goldstone Deep Space Communications Complex	Fort Irwin, CA		
	Ms. Karla Warner	Goldstone Deep Space Communications Complex	Fort Irwin, CA		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Oct 04	07 Oct 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	84	0	0

A282. Goldstone Communications Complex: Student Tours

Theme(s):	Planetary				
Msn/Prgm:	DSMS[B114]				
Description:	Goldstone's student field trip program is an all-day event designed to meet age-appropriate State standards in math, science, English, and history. The tour begins in the Goldstone Museum with videos and presentations on current missions, followed by a driving tour of the 53-square-mile complex to view eight large antennas, a stop at the Operations Control Center Signal Processing Center 10, and a visit to the pedestal room museum in the 70-meter Deep Space Station 14 antenna.				
Lead:	Ms. Marie Massey, Goldstone Deep Space Communications Complex, Fort Irwin, CA 92310. E-mail: <i>Marie.massey@csconline.com</i> . Phone: 760-255-8687.				
Primary URL:	<i>http://gts.gdscc.nasa.gov/</i>				
Secondary URL:	<i>http://deepspace.jpl.nasa.gov/dsn/educ/index.html</i>				
Scientist(s):	Ms. Gina Butcher	Goldstone Deep Space Communications Complex	Fort Irwin, CA		
	Ms. Marie Massey	Goldstone Deep Space Communications Complex	Fort Irwin, CA		
	Ms. Karla Warner	Goldstone Deep Space Communications Complex	Fort Irwin, CA		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	01 Oct 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	15	0	0
06 Dec 04	06 Dec 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	36	0	0
08 Dec 04	08 Dec 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	7	0	0
10 Jan 05	19 Jan 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	233	0	0
02 Feb 05	02 Feb 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	30	0	0
01 Apr 05	30 Apr 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	178	0	0
01 May 05	31 May 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	320	0	0
01 Jun 05	30 Jun 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	9	0	0

A283. GRACE: Bridge Point Elementary School Science Day

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Eighty students participated in space science activities relating to the GRACE mission. Students participated in hands-on experiential activities included in the GRACE online educational exercises. These exercises supported additional activities that classroom teachers used in their Earth science teaching.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.Primary URL: <http://www.csr.utexas.edu/grace>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Jan 05	28 Jan 05	Bridge Point Elementary School—Austin, TX	80	0	0

A284. GRACE: Brykerwood Elementary School Science Day

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Sixty students participated in Earth science activities conducted by the GRACE E/PO team during the Brykerwood Science Day. Students learned about this mission, which is studying and mapping Earth's gravity field. Participants tried to find their center of gravity, conducted satellite activities, and learned how the satellite operates.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.Primary URL: <http://www.tsgc.utexas.edu>Secondary URL: <http://www.tsgc.utexas.edu>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
06 May 05	06 May 05	Brykerwood Elementary School—Austin, TX	60	0	0

A285. GRACE: Earth Science Week Career Fair

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: The Texas Space Grant Consortium provided an Earth science exhibit on the Gravity Recovery And Climate Experiment (GRACE) mission during the Earth Science Week career fair for 365 middle school students. Students viewed models of the GRACE satellite and participated in interactive activities on the Web site while learning about Earth science and NASA missions.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.Primary URL: <http://www.csr.utexas.edu/grace>Secondary URL: <http://www.beg.utexas.edu/esw/>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Oct 05	11 Oct 05	University of Texas at Austin—Austin, TX	365	0	0

A286. GRACE: High School Career Fair

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Area high school students visited the University of Texas Center for Space Research to learn more about NASA missions and careers in engineering. Scientists from the GRACE and ICESat missions visited with the students to explain course selection and career opportunities. Students visited the labs, received information, and viewed the receiving station.

Contact: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.Primary URL: <http://www.csr.utexas.edu/grace>Secondary URL: <http://www.tsgc.utexas.edu>**A287. GRACE: High School Design Challenge**

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: GRACE E/PO staff mentored high school students from the McNeil Engineering Academy during their preparation for the design challenge. Information about the GRACE mission was distributed to 25 students.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu/spacevision>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 May 05	09 May 05	McNeil High School—Austin, TX	25	0	0

A288. GRACE: Minorities Introduction to Engineering

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Minority students interested in pursuing engineering were introduced to various topics during summer programs at the University of Texas at Austin. One hundred forty-four students participated in Gravity Recovery And Climate Experiment (GRACE) gravity activities while viewing gravity maps and learning about the purpose of the mission and how data are collected.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.engr.utexas.edu/eoe/MITE/index.cfm>

Secondary URL: <http://www.tsgc.utexas.edu/spacevision>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Jun 05	15 Aug 06	University of Texas at Austin—Austin, TX	140	0	0

A289. GRACE: NASA Student Involvement Program

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: Two hundred students and 50 parents attended the NASA Student Involvement Program awards ceremony for Earth science, with awards presented by the GRACE E/PO chair. The general assembly in Wichita Falls, TX, provided mission information to those attending and the media.

Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.tsgc.utexas.edu>

Secondary URL: <http://www.nsip.nasa.gov>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
24 May 05	25 May 05	Crockett Elementary School—Wichita Falls, TX	250	0	0

A290. GRACE: Santa Clarita Science Day

Theme(s): Earth Science

Msn/Prgm: GRACE[B4]

Description: GRACE educational materials, including lithographs, CD, fact sheet, and posters, were provided to teachers for their use in school classes.

Contact: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.

Primary URL: <http://www.csr.utexas.edu/grace>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Feb 05	03 Feb 05	Santa Clarita Elementary School— Santa Clarita, CA	20	0	0

A291. IMAGE: Classroom Visits

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: IMAGE[B75]

Description: IMAGE supports enhancing classroom education through visits to local schools. This is an invaluable source of information and experience used by IMAGE to improve its educational products.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/educator/Educator.html>

Secondary URL: <http://image.gsfc.nasa.gov/poetry/activities.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
20 Apr 05	20 Apr 05	Forest Oak Middle School—Gaithersburg, MD	123	0	0
23 Sep 05	23 Sep 05	Parkland Middle School—Rockville, MD	47	0	0

A292. Immersive Earth: School Presentations

Theme(s): Planetary
 Msn/Prgm: Immersive Earth[B18]
 Description: Immersive Earth presents programming directly to students as part of their in-school curriculum. Shows include Immersive Earth productions of Earth's Wild Ride, Force Five, and others, as well as live instruction covering such topics as current events in Earth science and astronomy. The programs have associated activities, are aligned with standards, and include evaluations.

Contact: Ms. Tara Oakes, Houston Museum of Natural Science, Houston, TX 77030. E-mail: toakes@hmns.org.
 Primary URL: <http://earth.rice.edu>
 Scientist(s): Dr. Kerry Handron Carnegie Museum of Natural History Pittsburgh, PA
 Dr. Patricia Reiff Rice University Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 Dec 04	17 Dec 04	Beaver Area School District—Beaver, PA	93	0	0
24 Jan 05	24 Jan 05	Houston Independent School District—Houston, TX	337	0	0
02 Mar 05	02 Mar 05	Aldine Independent School District—Houston, TX	158	0	0
28 Mar 05	28 Mar 05	Montgomery Independent School District—Montgomery, TX	380	0	0
07 Jul 05	07 Jul 05	Chino Ranch Library—Katy, TX	0	157	0

A293. Landsat Data Continuity Mission (LDCM): Student Internship

Theme(s): Earth Science
 Msn/Prgm: LDCM[B5]
 Description: Landsat Data Continuity Mission (LDCM) Salish-Kootenai Tribal College (SKC) internships enable tribal students to access and use remote sensing data professionally. Each summer in recent years, LDCM has offered three internships to qualified Native American students. Each intern is paired with a single scientist mentor and provided with training in remote sensing, image processing, and use of Landsat data for a student-chosen research project applicable to tribal or college interests. LDCM E/PO is working to expand this effort to involve missions across Goddard Space Flight Center, thereby providing broader opportunities for tribal student education.

Lead: Ms. Anita Davis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. Phone: 301-614-6669.
 Primary URL: <http://ldcm.gsfc.nasa.gov/>
 Secondary URL: <http://landsat.gsfc.nasa.gov>

A294. LA's Better Educated Students for Tomorrow (BEST)

Theme(s): Earth Science
 Msn/Prgm: Aqua[B2]
 Description: Sharon Okonek, Annie Richardson, and Akiko Hayashi (participating as an observer) went to the Hillery T. Broadous Elementary School in Pacoima to give atmosphere (Sharon) and ocean (Annie) presentations to 25 students and 3 teachers who are participants in the L.A.'s BEST after-school program. They showed an Aqua launch video and did hands-on activities, including a student-made "flip book" using a series of AIRS weather maps to show how weather moves across the U.S., an ocean and atmosphere word search/hidden message puzzle, and a science fair word search puzzle. They also distributed handouts, including AIRS posters; T/P/J, GRACE, and NASA decals; Active Cavity Radiometer Irradiance Monitor Satellite (ACRIMSAT) bookmarks; GRACE trading cards; and the Discovering the Oceans book cover. In the second of their two visits as part of the JPL and L.A.'s BEST collaboration, Annie Richardson and Sharon Okonek spoke to approximately 35 African-American students and one staff member at Baldwin Hills Elementary School in Los Angeles. The presentation was about how we use the TOPography EXperiment (TOPEX) and Jason radar altimeters to study the ocean and how we use the Atmospheric Infrared Sounder to study the atmosphere. Handouts included a science fair word search and an ocean and atmosphere word search/hidden message puzzle. Okonek and Richardson also gave out Earth folders, book covers, bookmarks, decals, and lithographs to all the students, and they left posters for the classroom. At the end of the visit, Okonek and Richardson asked questions about the presentations and gave out special tokens for correct answers. The students had some interesting questions and said they learned a lot about NASA, Earth science, and protecting our environment.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

Scientist(s): Ms. Annie Richardso NASA Jet Propulsion Laboratory Pasadena, CA
 Partner(s): Los Angeles Better Educated Students for Tomorrow (LA's BEST) Los Angeles, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
13 Dec 04	13 Dec 04	Baldwin Hills Elementary School—Los Angeles, CA	35	0	0
13 Dec 04	13 Dec 04	Broadous Elementary School—Pacoima, CA	28	0	0

A295. Magnetospheric MultiScale (MMS): School Visits

Theme(s): Heliophysics
 Msn/Prgm: MMS[B86]
 Description: These school visits entail teaching space weather directly to students.
 Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.
 Contact: Dr. Deborah Jensen, Rice University, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

Primary URL: <http://stp.gsfc.nasa.gov/missions/mms/mms.htm>

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Oct 04	15 Oct 04	Dr. James L. Burch Elementary School— San Antonio, TX	96	0	0

A296. Magnetospheric MultiScale (MMS): Student Programs

Theme(s): Heliophysics
 Msn/Prgm: MMS[B86]
 Description: The MMS student programs provide a connection between classroom instruction and real-world research experiences in Earth and space science, physics, information science, and engineering. Activity goals are to increase the number of students seeking careers in science and engineering and to enhance student success in those fields. The MMS student programs are the outcome of combining high-quality programs with cutting-edge curricula related to the MMS mission.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

Primary URL: <http://stp.gsfc.nasa.gov/missions/mms/mms.htm>

Scientist(s): Dr. Daniel Boice Southwest Research Institute San Antonio, TX
 Dr. Patricia Reiff Rice University Houston, TX

Partner(s): Southwest Research Institute San Antonio, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jun 05	17 Jun 05	Southwest Research Institute— San Antonio, TX	13	0	0

A297. Magnetospheric MultiScale (MMS): Underserved Minority Student Presentations

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: Immersive Earth[B18], MI Initiative[B27], Cluster II[B81], MMS[B86]
 Description: Presentations at workshops and conferences designed to increase participation of underserved minorities in science and engineering, including SACNAS and special school and university programs.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

Primary URL: <http://earth.rice.edu>

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX

Partner(s): Houston Museum of Natural Science Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
29 Sep 05	30 Sep 05	Society for the Advancement of Chicanos and Native Americans in Science National Conference 2005—Denver, CO	0	790	0

A298. Mars: Classroom Visits

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars classroom visits are presentations in a formal education setting; they supplement ongoing learning in the classroom, highlighting how science, mathematics, and technology instruction relates to Mars exploration and vice versa. Scientists and engineers who are working on the Mars missions volunteer their time; provide role-modeling experiences for students; and generate an interest in scientific discovery, technology innovation, and space exploration careers. They also assist in disseminating Mars-related educational and informational materials to teachers and students. In addition to Mars missions, these visits teach students about Mars itself and compare it to Earth, bringing visuals and stories that make Mars an increasingly familiar planet and place to explore. They also alert teachers and students to the ongoing opportunities and programs in which they can participate.

Contact: Ms. Stephanie Lear, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Stephanie.L.Lear@jpl.nasa.gov.

Scientist(s): Ms. Jaclyn Allen Lockheed Martin Corporation Houston, TX
 Mr. Enrique Baez NASA Jet Propulsion Laboratory Pasadena, CA

Dr. Bob Balaram	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Todd Barber	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Kris Becker	U.S. Geological Survey	Flagstaff, AZ
Dr. Jim Bell	Cornell University	Ithaca, NY
Ms. Kelly Bender	Arizona State University	Tempe, AZ
Mr. Leo Bister	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Nathan Bridges	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Lamont Burgess	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. John Callas	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Brian Cooper	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Robert G. Deen	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Emily Eelkema	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jeff Favretto	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Connie Gennaro	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Roy Gladden	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Steve Greenberg	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Virginia Gulick	NASA Ames Research Center	Moffett Field, CA
Dr. Randy Herrera	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Karen Hogan	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Laszlo Keszthelyi	U.S. Geological Survey	Flagstaff, AZ
Ms. Sheri Klug	Arizona State University	Tempe, AZ
Mr. Steve Klug	Fees Middle School	Tempe, AZ
Mr. Geoffrey Lake	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Francisco Loaiza	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Douglas Lombardi	University of Arizona	Tucson, AZ
Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Tom Nolan	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. George Pace	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Richard Petras	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Jeffrey Plaut	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Serene Rawlings	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Chase Rief	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. James Rose	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Ali Safaeinili	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Cindy Schultz	Lockheed Martin Space Systems	Littleton, CO
Mr. Fred Serricchio	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Richard Shope	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Clint Simmons	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Bonnie Theberge	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kathie Thomas-Keprta	NASA Johnson Space Center	Houston, TX
Ms. Violet Tissot	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
Ms. Paige Valderrama	Arizona State University	Tempe, AZ
Mr. Rick Welch	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Harry Woo	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Oct 04	04 Oct 04	Flagstaff Junior Academy—Flagstaff, AZ	42	0	0
05 Oct 04	05 Oct 04	Knoles Elementary School—Flagstaff, AZ	33	0	0
07 Oct 04	07 Oct 04	Bursch Elementary School—Baldwin Park, CA	31	0	0
07 Oct 04	07 Oct 04	Flagstaff Junior Academy—Flagstaff, AZ	21	0	0
07 Oct 04	07 Oct 04	Mammoth Elementary School— San Manuel-Mammoth, AZ	57	0	0
08 Oct 04	08 Oct 04	Newbury Elementary School—Newbury, MA	690	0	0
13 Oct 04	13 Oct 04	Claremont High School—Claremont, CA	91	0	0
13 Oct 04	13 Oct 04	Walker Butte Elementary School—Florence, AZ	89	0	0
27 Oct 04	27 Oct 04	Sacaton Middle School—Sacaton, AZ	35	0	0
09 Nov 04	09 Nov 04	Stanford University—Stanford, CA	27	0	0
11 Nov 04	11 Nov 04	Harper-Archer Middle School—Atlanta, GA	130	0	0
11 Nov 04	11 Nov 04	Stanford University—Stanford, CA	27	0	0
11 Nov 04	11 Nov 04	University of Alaska, Anchorage— Anchorage, AK	0	200	0
12 Nov 04	12 Nov 04	Diamond High School—Anchorage, AK	50	0	0
12 Nov 04	12 Nov 04	University of Alaska, Anchorage— Anchorage, AK	30	0	0
15 Nov 04	15 Nov 04	Red Rock School—Red Rock, AZ	55	0	0
19 Nov 04	19 Nov 04	DinE College—Tsaile, AZ	32	0	0

22 Nov 04	22 Nov 04	Great Neck Middle School— Virginia Beach, VA	50	0	0
29 Nov 04	29 Nov 04	Georgia Institute of Technology—Atlanta, GA	94	0	0
02 Dec 04	02 Dec 04	Compton Avenue Elementary School— Los Angeles, CA	128	0	0
02 Dec 04	02 Dec 04	Rosedell Elementary School—Saugus, CA	33	0	0
09 Dec 04	09 Dec 04	Cornell University—Ithaca, NY	27	0	0
09 Dec 04	09 Dec 04	Palm Crest Elementary School— La Ca-ada, CA	21	0	0
14 Dec 04	14 Dec 04	Castlebay Elementary School—Northridge, CA	150	0	0
19 Jan 05	19 Jan 05	Kansas Newman University—Wichita, KS	71	0	0
21 Jan 05	21 Jan 05	Pico Canyon Elementary School— Stevenson Ranch, CA	936	0	0
24 Jan 05	24 Jan 05	La Porte Junior High School—La Porte, TX	15	0	0
24 Jan 05	24 Jan 05	Maricopa High School—Maricopa, AZ	19	0	0
26 Jan 05	26 Jan 05	Rio Vista Elementary School—Tucson, AZ	13	0	0
02 Feb 05	02 Feb 05	St. Therese School—Succasunna, NJ	30	0	0
18 Feb 05	18 Feb 05	Silver Oak Elementary School—San Jose, CA	23	0	0
02 Mar 05	02 Mar 05	Rogers Middle School—Pearland, TX	99	0	0
03 Mar 05	03 Mar 05	Silver Oak Elementary School—San Jose, CA	225	0	0
03 Mar 05	03 Mar 05	Silver Oak Elementary School—San Jose, CA	300	0	0
11 Mar 05	11 Mar 05	Helmets Elementary School—Valencia, CA	35	0	0
11 Mar 05	12 Mar 05	Mount Miguel High School—San Diego, CA	107	0	0
19 Mar 05	20 Mar 05	Sinte Gleska University—Mission, SD	500	0	0
24 Mar 05	25 Mar 05	Los Cerritos Middle School— Thousand Oaks, CA	202	0	0
30 Mar 05	30 Mar 05	Santa Cruz Valley Union High School— Eloy, AZ	22	0	0
31 Mar 05	31 Mar 05	Grace Lutheran School—Escondido, CA	39	0	0
05 Apr 05	05 Apr 05	Red Rock School—Red Rock, AZ	6	0	0
08 Apr 05	08 Apr 05	Challenger Elementary School—Nogales, AZ	104	0	0
16 Apr 05	16 Apr 05	Lockwood Elementary School— Los Angeles, CA	322	0	0
17 Apr 05	17 Apr 05	Los Angeles Valley College—Valley Glen, CA	47	0	0
22 Apr 05	22 Apr 05	La Crescenta Christian School— La Crescenta, CA	75	0	0
25 Apr 05	25 Apr 05	Kennedy Middle School—Redwood City, CA	142	0	0
25 Apr 05	25 Apr 05	Space Coast Junior/Senior High School— Cocoa, FL	167	0	0
26 Apr 05	26 Apr 05	Cocoa High School—Cocoa, FL	106	0	0
26 Apr 05	26 Apr 05	Johnson Middle School—Melbourne, FL	177	0	0
27 Apr 05	27 Apr 05	Cocoa Beach High School—Cocoa Beach, FL	368	0	0
27 Apr 05	27 Apr 05	Jefferson Middle School—Merritt Island, FL	254	0	0
27 Apr 05	27 Apr 05	McNair Middle School—Cocoa, FL	88	0	0
28 Apr 05	28 Apr 05	Merritt Island High School—Merritt Island, FL	247	0	0
29 Apr 05	29 Apr 05	Madison Middle School—Titusville, FL	388	0	0
29 Apr 05	29 Apr 05	Palm Bay High School—Melbourne, FL	43	0	0
29 Apr 05	29 Apr 05	Space Coast Junior/Senior High School— Cocoa Beach, FL	92	0	0
09 May 05	09 May 05	Pinion Mesa Middle School—Phelen, CA	52	0	0
25 May 05	25 May 05	Levi Dickey Elementary School—Ontario, CA	05	0	0
25 May 05	25 May 05	Maryland Avenue Elementary School— Columbus, OH	217	0	0
03 Jun 05	03 Jun 05	Chinese American International School— San Francisco, CA	48	0	0
08 Jun 05	08 Jun 05	Abraham Joshua Heschel Day School— Northridge, CA	42	0	0
08 Jun 05	08 Jun 05	Camino Grove Elementary School— Arcadia, CA	33	0	0
08 Jun 05	08 Jun 05	Old Orchard Elementary School— Santa Clarita, CA	21	0	0
13 Jun 05	13 Jun 05	Lockheed Martin Space Systems—Littleton, CO	0	160	0
15 Jun 05	15 Jun 05	Mountain Avenue Elementary School— La Crescenta, CA	42	0	0
11 Jul 05	15 Jul 05	California State University, Bakersfield— Bakersfield, CA	70	0	0
18 Jul 05	22 Jul 05	California State University, Bakersfield— Bakersfield, CA	30	0	0

16 Sep 05	16 Sep 05	Montessori Charter School of Flagstaff— Flagstaff, AZ	32	0	0
21 Sep 05	21 Sep 05	Sunshine Academy Elementary School— Valencia, CA	31	0	0
15 Dec 05	15 Dec 05	Newport Heights Elementary School— Newport Beach, CA	36	0	0

A299. Mars: Imagine Mars

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Imagine Mars is a national science, art, and technology education initiative that challenges students to design a community on Mars that would be scientifically sound and offer a high quality of life. It draws on the former Mars Millennium Program. An integration of science, mathematics, and technology with the arts and humanities, it opens a door into science and technology for students who are more humanities-inclined and would otherwise not be as exposed to the excitement of scientific discovery. Activities are based on arts and humanities standards as well as science education standards. Scientists, engineers, artists, architects, and other community members serve as role models.

Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov.
Phone: 818-354—8774.

Primary URL: <http://ImagineMars.jpl.nasa.gov>

Scientist(s):	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Dr. Bob Anderson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John G. Beck	Stanford University	Stanford, CA
	Dr. Diana Blaney	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Cassie Bowman	NASA Ames Research Center	Moffett Field, CA
	Mr. Kobie Boykins	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John Callas	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David Delgado	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Linda Doran	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Emily Eelkema	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Eva Graham	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Scott Hulme	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jackie Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Mr. Geoffrey Lake	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Stephenie Lieveise	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Rino Passaniti	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Serene Rawlings	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. James Rose	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David Seidel	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
	Dr. Ashitey Trebi-Ollennu	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Eddie Tunstel	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Nov 04	01 Nov 05	California Art Education Association Conference—Riverside, CA	10	0	0
01 Feb 05	28 Feb 05	Northpointe Housing Complex— Long Beach, CA	31	0	0
24 Feb 05	26 Feb 05	National Afterschool Association— San Antonio, TX	46	0	0
01 Mar 05	31 Mar 05	Northpointe Housing Complex— Long Beach, CA	31	0	0
05 Apr 05	05 Apr 05	Northpointe Housing Complex— Long Beach, CA	44	0	0
03 Jun 05	04 Jun 05	University of Houston-Downtown— Houston, TX	24	0	0
25 Jun 05	25 Jun 05	Northpointe Housing Complex— Long Beach, CA	9	0	0
27 Jun 05	01 Jul 05	Neighborhood Networks 10th Anniversary National Training Conference— Lake Buena Vista, FL	0	350	0
27 Jun 05	01 Jul 05	Neighborhood Networks 10th Anniversary National Training Conference— Lake Buena Vista, FL	40	0	0
19 Sep 05	23 Sep 05	Academy Homes—Roxbury, MA	20	0	0
20 Sep 05	20 Sep 05	Mass Housing—Boston, MA	16	0	0

A300. Mars: Mars Exploration Student Data Team

Theme(s): Planetary
 Msn/Prgm: Mars Public Engagement[B97]
 Description: Competitively selected student teams study and characterize different aspects of the Martian atmosphere and surface, often working in online virtual teams. The students have regular interactions with orbital science team members in comparing orbital data with that collected by the Mars Exploration Rovers and other landed mission data sets.
 Contact: Ms. Stephenie Lievense, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Stephenie.H.Lievense@jpl.nasa.gov. Phone: 818-393-6729.
 Primary URL: <http://mars/classroom/students/mesdt.html>

A301. Mars: Mars Robotics Education Partnership

Theme(s): Planetary
 Msn/Prgm: Mars Public Engagement[B97]
 Description: This partnership builds a cohesive set of robotics activities at all grade levels for progressive learning, in which each set of grade-appropriate, standards-aligned activities prepares students for the next. The framework will enable students to move through the "pipeline" to more sophisticated activities, preparing them for potential careers in technology and engineering.
 Contact: Ms. Cassie Bowman, NASA Ames Research Center, Moffett Field, CA 94035.
 E-mail: cbowman@mail.arc.nasa.gov. Phone: 617-547-3482.
 Scientist(s):
 Mr. Robert Burke NASA Jet Propulsion Laboratory Pasadena, CA
 Ms. Tracy Drain NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Michael Garrett NASA Jet Propulsion Laboratory Pasadena, CA
 Ms. Sheri Klug Arizona State University Tempe, AZ
 Ms. Stephanie Lear NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Douglas Lombardi University of Arizona Tucson, AZ
 Dr. Jennifer Rochlis NASA Johnson Space Center Houston, TX
 Mr. Adam Steltzner NASA Jet Propulsion Laboratory Pasadena, CA
 Ms. Michelle Viotti NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Keith Watt Arizona State University Tempe, AZ
 Dr. Shonte Wright NASA Jet Propulsion Laboratory Pasadena, CA
 Mr. Peter Xaypraseuth NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Dec 04	02 Dec 04	Pinal County School Extension Office— Florence, AZ	12	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference—Richmond, VA	41	0	0
15 Jan 05	30 Mar 05	Casa Grande Union High School— Casa Grande, AZ	13	0	0
02 Feb 05	02 Feb 05	Pinal County School Extension Office— Florence, AZ	12	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	10	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	19	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	56	0	0
21 Apr 05	23 Apr 05	Georgia Dome—Atlanta, GA	0	18000	0

A302. Mars: Mars Student Imaging Project

Theme(s): Planetary
 Msn/Prgm: Mars Public Engagement[B97]
 Description: The Mars Student Imaging Project utilizes a NASA imaging facility at Arizona State University for scientists and students who are studying Mars. It is available to grades 5-12 and undergraduate educators and students. Teacher guides and curriculum supplements use real data taken first from orbital data obtained by the Mars Global Surveyor and 2001 Mars Odyssey and, later, by the Mars Reconnaissance Orbiter. Orbital data are compared to ground data collected from the Mars Pathfinder, Mars Exploration Rovers, and, later, Phoenix and Mars Science Laboratory. Activities are tested and reviewed by scientists and master educators and are made available online and in hard copy. All are inquiry-based activities that meet the national science, mathematics, and technology education standards. Pre- and postproject mentoring for teachers is a part of the program design, maximizing the impact of a real science infusion into the classroom. A number of middle school, high school, and undergraduate student teams also have the opportunity to participate directly in the scientific exploration of Mars in near real time. Student teams from across the United States submit proposals to take pictures of specific regions of Mars, explaining the scientific questions they would like to answer. They then participate in acquiring the image, analyzing the data, and presenting their findings. As least one-quarter of the imaging-team slots are reserved for underrepresented groups (minority, female, rural, and inner-city), which are recruited through contacts with minority institutions and other programs. In addition to onsite student missions, opportu-

nities for students exist through distance learning and through a special archived-image library of data that will be developed using data from all of NASA's past, present, and future Mars missions.

Contact: Ms. Sheri Klug, Arizona State University, Tempe, AZ 85287-1404. E-mail: sklug@asu.edu.
Phone: 480-727-6495.

Primary URL: <http://msip.asu.edu>

Secondary URL: <http://mars.jpl.nasa.gov>

Scientist(s):	Dr. Josh Bandfield	Arizona State University	Tempe, AZ
	Ms. Kelly Bender	Arizona State University	Tempe, AZ
	Ms. Mary Davis	Arizona State University	Tempe, AZ
	Mr. Brian Gootee	Arizona State University	Tempe, AZ
	Mr. Brian Grigsby	Schreder Planetarium and Science Learning Center	Redding, CA
	Ms. Meggin Kirk	Arizona State University	Tempe, AZ
	Ms. Amy Knudson	Arizona State University	Tempe, AZ
	Ms. Kim Murray	Arizona State University	Tempe, AZ
	Mr. Scott Nowicki	Arizona State University	Tempe, AZ
	Dr. Jim Rice	Arizona State University	Tempe, AZ
	Ms. Paige Valderrama	Arizona State University	Tempe, AZ
	Mr. Gilead Wurman	Arizona State University	Tempe, AZ

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	01 Oct 04	Arizona State University—Tempe, AZ	9	0	0
07 Oct 04	07 Oct 04	Arizona State University—Tempe, AZ	26	0	0
11 Oct 04	11 Oct 04	Arizona State University—Tempe, AZ	58	0	0
20 Oct 04	20 Oct 04	Arizona State University—Tempe, AZ	6	0	0
17 Nov 04	17 Nov 04	Space Center Houston—Houston, TX	11	0	0
19 Nov 04	19 Nov 04	Space Center Houston—Houston, TX	156	0	0
23 Nov 04	23 Nov 04	Space Center Houston—Houston, TX	14	0	0
29 Nov 04	29 Nov 04	Space Center Houston—Houston, TX	181	0	0
30 Nov 04	30 Nov 04	Space Center Houston—Houston, TX	21	0	0
01 Dec 04	01 Dec 04	Arizona State University—Tempe, AZ	11	0	0
10 Dec 04	10 Dec 04	Arizona State University—Tempe, AZ	37	0	0
14 Dec 04	14 Dec 04	Arizona State University—Tempe, AZ	33	0	0
20 Dec 04	22 Dec 04	Arizona State University—Tempe, AZ	13	0	0
23 Dec 04	23 Dec 04	Arizona State University—Tempe, AZ	9	0	0
03 Jan 05	03 Jan 05	Arizona State University—Tempe, AZ	112	0	0
06 Jan 05	06 Jan 05	Arizona State University—Tempe, AZ	24	0	0
10 Jan 05	12 Jan 05	Arizona State University—Tempe, AZ	33	0	0
11 Jan 05	11 Jan 05	Arizona State University—Tempe, AZ	10	0	0
11 Jan 05	11 Jan 05	Arizona State University—Tempe, AZ	31	0	0
13 Jan 05	13 Jan 05	Arizona State University—Tempe, AZ	17	0	0
13 Jan 05	13 Jan 05	Arizona State University—Tempe, AZ	61	0	0
18 Jan 05	20 Jan 05	Arizona State University—Tempe, AZ	24	0	0
20 Jan 05	30 Sep 05	Arizona State University—Tempe, AZ	127	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	1	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	2	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	6	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	9	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	12	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	15	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	18	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	25	0	0
24 Jan 05	24 Jan 05	Arizona State University—Tempe, AZ	57	0	0
25 Jan 05	25 Jan 05	Arizona State University—Tempe, AZ	21	0	0
29 Jan 05	30 Sep 05	Arizona State University—Tempe, AZ	26	0	0
04 Feb 05	04 Feb 05	Arizona State University—Tempe, AZ	9	0	0
09 Feb 05	30 Sep 05	Arizona State University—Tempe, AZ	181	0	0
16 Feb 05	30 Sep 05	Arizona State University—Tempe, AZ	48	0	0
22 Feb 05	24 Feb 05	Arizona State University—Tempe, AZ	14	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	6	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	8	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	13	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	14	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	17	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	19	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	22	0	0
28 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	28	0	0
28 Feb 05	30 Sep 05	Arizona State University—Tempe, AZ	121	0	0

02 Mar 05	30 Sep 05	Arizona State University—Tempe, AZ	5	0	0
04 Mar 05	04 Mar 05	Arizona State University—Tempe, AZ	65	0	0
07 Mar 05	09 Mar 05	Arizona State University—Tempe, AZ	15	0	0
01 Apr 05	01 Apr 05	Arizona State University—Tempe, AZ	34	0	0
04 Apr 05	04 Apr 05	Arizona State University—Tempe, AZ	13	0	0
04 Apr 05	06 Apr 05	Arizona State University—Tempe, AZ	53	0	0
06 Apr 05	06 Apr 05	Arizona State University—Tempe, AZ	13	0	0
11 Apr 05	13 Apr 05	Arizona State University—Tempe, AZ	21	0	0
12 Apr 05	12 Apr 05	Arizona State University—Tempe, AZ	15	0	0
18 Apr 05	18 Apr 05	Arizona State University—Tempe, AZ	121	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	3	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	11	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	13	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	17	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	22	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	27	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	31	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	57	0	0
02 May 05	04 May 05	Arizona State University—Tempe, AZ	55	0	0
10 May 05	12 May 05	Arizona State University—Tempe, AZ	27	0	0
16 May 05	16 May 05	Arizona State University—Tempe, AZ	1	0	0
16 May 05	30 Sep 05	Arizona State University—Tempe, AZ	13	0	0
31 May 05	01 Jun 05	Arizona State University—Tempe, AZ	35	0	0
06 Jun 05	06 Jun 05	Arizona State University—Tempe, AZ	17	0	0
09 Jun 05	30 Sep 05	Arizona State University—Tempe, AZ	59	0	0
15 Jun 05	30 Sep 05	Arizona State University—Tempe, AZ	4	0	0
15 Jun 05	30 Sep 05	Arizona State University—Tempe, AZ	91	0	0
19 Jun 05	30 Sep 05	Arizona State University—Tempe, AZ	12	0	0
19 Jun 05	30 Sep 05	Arizona State University—Tempe, AZ	20	0	0
01 Aug 05	03 Aug 05	Arizona State University—Tempe, AZ	11	0	0
08 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	12	0	0
15 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	29	0	0
16 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	10	0	0
22 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	11	0	0
30 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	8	0	0
30 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	26	0	0
30 Aug 05	30 Sep 05	Arizona State University—Tempe, AZ	35	0	0
01 Sep 05	30 Sep 05	Arizona State University—Tempe, AZ	11	0	0
01 Sep 05	30 Sep 05	Arizona State University—Tempe, AZ	106	0	0

A303. Mars: Student Workshops

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Student workshops are either formal or informal educational activities that take place in an in-school or after-school environment. Activities are hands-on and inquiry-based and enable students to have fun with Mars topics and experience scientific discovery firsthand.

Contact: Ms. Sheri Klug, Arizona State University, Tempe, AZ 85287-1404. E-mail: sklug@asu.edu.
Phone: 480-727-6495.

Primary URL: <http://marsed.asu.edu>

Scientist(s):	Dr. Carlton C. Allen	NASA Johnson Space Center	Houston, TX
	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Ms. Brooke Carson	Keystone Science Institute	Keystone, CO
	Ms. Mary Davis	Arizona State University	Tempe, AZ
	Dr. Everett Gibson	NASA Johnson Space Center	Houston, TX
	Ms. Amy Knudson	Arizona State University	Tempe, AZ
	Ms. Kennnda Lynch	Lockheed Martin Corporation	Houston, TX
	Dr. Gordon McKay	NASA Johnson Space Center	Houston, TX
	Dr. Douglas Ming	NASA Johnson Space Center	Houston, TX
	Ms. Mary Beth Murrill	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Ellen Reid	Keystone Science Institute	Keystone, CO
	Ms. Deanne Rogers	Arizona State University	Tempe, AZ
	Ms. Karen Stocco	Pasadena Independent School District	Pasadena, TX
	Mr. Kevin Talley	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
	Ms. Paige Valderrama	Arizona State University	Tempe, AZ

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Nov 04	19 Nov 04	Arizona State University—Tempe, AZ	152	0	0

11 Dec 04	11 Dec 04	University of Arizona—Tucson, AZ	106	67	0
04 Mar 05	04 Mar 05	Tejano Center-Hogar de Ni-os—Houston, TX	26	0	0
05 Mar 05	05 Mar 05	Arizona State University—Tempe, AZ	42	0	0
14 Jun 05	14 Jun 05	NASA Johnson Space Center—Houston, TX	31	0	0
14 Jun 05	14 Jun 05	NASA Johnson Space Center—Houston, TX	34	0	0
20 Jun 05	23 Jun 05	Texas Tech University—Lubbock, TX	11	0	0
21 Jun 05	21 Jun 05	NASA Johnson Space Center—Houston, TX	36	0	0
21 Jun 05	21 Jun 05	NASA Johnson Space Center—Houston, TX	37	0	0
28 Jun 05	28 Jun 05	NASA Johnson Space Center—Houston, TX	32	0	0
28 Jun 05	29 Jun 05	Brevard County Libraries—Cocoa, FL	0	170	0
19 Jul 05	21 Jul 05	Texas Tech University—Lubbock, TX	15	0	0

A304. MESSENGER: Student Support

Theme(s):	Planetary				
Msn/Prgm:	STEREO[B88], TIMED[B89], MRO[B102], New Horizons (Pluto-Kuiper Belt) Mission[B105], MESSENGER[B109], NEAR[B110]				
Description:	MESSENGER was a part of "Engineering Days." Students circulated in a large tent with multiple displays and hands-on activities.				
Lead:	Ms. Stephanie Stockman, Science Systems and Applications, Inc., Lanham, MD 20706. Phone: 301-614-6457.				
Primary URL:	http://www.nasa.gov/mission_pages/messenger/main/index.html				
Secondary URL:	http://messenger.jhuapl.edu/				
Scientist(s):	Dr. Wayne Miller	Lawrence Livermore National Laboratory	Livermore, CA		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
25 Feb 05	25 Feb 05	Lawrence Livermore National Laboratory— Livermore, CA	500	0	0

A305. MicroObservatory Online Telescopes

Theme(s):	Heliophysics, Astrophysics, Planetary				
Msn/Prgm:	SEU[B35]				
Description:	The SEU Forum at the Harvard-Smithsonian Center for Astrophysics supports this network of robotic online telescopes, which allows students and teachers in middle and high school classrooms nationwide to investigate the night sky from the convenience of their classrooms. By means of an intuitive Web interface, users control the telescopes by specifying the target, exposure time, observation time, filter, and telescope site location. Image-processing software and curriculum activities are available, allowing users to compare and contrast their own observations with data and images from NASA telescopes. MicroObservatory telescopes are also accessible to museum visitors through the Cosmic Questions traveling exhibition and serve as a resource to other NASA E/PO programs (for example, Explorers Schools, the Chandra After-School Astronomy Project out of the Massachusetts Institute of Technology's [MIT's] Center for Space Research, and the GLAST E/PO program). In Fiscal Year (FY) 2005, we expanded our audience to after-school programs that target teens from urban districts with large populations of underserved youth. In 2005, the MicroObservatory telescopes delivered over 30, 000 images to classroom users, 20, 000 images to museum visitors, and over 3, 000 images to participants from community after-school organizations. Assessment data show significant student gains in STEM learning and in attitudes toward science.				
Lead:	Dr. Roy Gould, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138. E-mail: rgould@cfa.harvard.edu . Phone: 617-496-7689.				
Primary URL:	http://mo-www.harvard.edu/MicroObservatory				
Scientist(s):	Mr. Freeman Deutsch	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA		
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA		
	Dr. Roy Gould	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA		
	Dr. Irene Porro	Massachusetts Institute of Technology	Cambridge, MA		
	Mr. Frank Sienkiewicz	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	05 Jan 05	Flandrau Science Center—Tucson, AZ	0	1861	0
01 Oct 04	30 Sep 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	0	2227	0
01 Feb 05	05 Sep 05	Museum of the Rockies—Bozeman, MT	0	5628	0
01 Jun 05	01 Sep 05	Egleston Square YMCA—Roxbury, MA	1	0	0
01 Jun 05	01 Sep 05	Hispanic Office of Planning and Evaluation—Lawrence, MA	22	0	0
01 Jun 05	01 Sep 05	John A. Shelburn Community Center—Roxbury, MA	31	0	0
01 Jun 05	01 Sep 05	Paraclete Center—South Boston, MA	12	0	0
01 Jun 05	01 Sep 05	Roxbury Multi-Service Center—Dorchester, MA	21	0	0
01 Jun 05	01 Sep 05	Whitier Street Health Center—Boston, MA	16	0	0

22 Jul 05	22 Jul 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0
27 Jul 05	27 Jul 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	13	0	0

A306. NASA Astrobiology Institute (NAI): NAI Astrobiology Formal Education (K–12)

Theme(s): Astrophysics, Planetary

Msn/Prgm: NAI[B62]

Description: NAI's 16 Lead: Teams are actively involved in formal classroom education in a variety of ways. NAI participated in eight different classroom-based programs: NAI's NASA Ames Research Center Lead: Team participated in the DEVELOP, JASON, and Yellowstone Association Institute programs; NAI's Marine Biological Laboratory (MBL) Lead: Team participated in the Woods Hole Science and Technology Partnership program and provided instruction at the Falmouth Academy; NAI's UCLA and SETI Institute Lead: Teams participated in the Licancabur Expedition Web-Chats and Casts program; NAI's University of Hawaii led programs for students on the Faulkes Telescope; and NAI's University of Washington Lead: Team sponsored Project AstroBio. In terms of resources for students, NAI's Indiana/Princeton/Tennessee Astrobiology Initiative (IPTAI) Lead: Team is developing videos and lesson plans for high schools students focusing on the study of subsurface life in South African and Arctic mines. NAI's MBL Lead: Team continues to update its micro*scope Web site and has added resources for teachers and students this year. NAI Central and NAI's Virtual Planetary Laboratory (VPL) Lead: Team both helped fund AstroVenture, and the VPL team was involved in developing AstroVenture's capstone project, Design a Planet. In terms of working with school districts, NAI's IPTAI Lead: Team is working with the Tennessee Knox County schools to set up field testing for IPTAI formal education products in development, and NAI's MBL Lead: Team coordinated with the Plymouth, MA, school district to incorporate astrobiology into their Oceans curriculum. Finally, NAI's MBL Lead: Team's E/PO Lead: provided instruction for the Cape Cod Community College General Education Development (GED) program.

Lead: Ms. Kristina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: Kristina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: dscalice@mail.arc.nasa.gov.Primary URL: <http://nai.nasa.gov>

Secondary

URL: <http://starcentral.mbl.edu/mv5d/>**A307. Navigator: Student Support and Classroom Visits**

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Navigator disseminates speakers and resources into K–12 classrooms to engage students and educators in the process of space exploration.

Lead: Ms. Jenny Tieu, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: jenny.t.tieu@jpl.nasa.gov.

Phone: 818-393-4765.

Scientist(s):	Dr. Matt Bobrowsky	Space Telescope Science Institute	Baltimore, MD
	Dr. Geoffrey Bryden	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Riley Duren	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Stephen Edberg	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Dan Goods	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Heidi Hammel	Space Science Institute	Boulder, CO
	Dr. James Kasting	Pennsylvania State University	University Park, PA
	Dr. Walter Lewin	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Chris Lindensmith	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John Monnier	University of Michigan	Ann Arbor, MI
	Mr. Greg Neat	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Richard Shope	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Wesley Traub	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 May 05	La Cañada High School—La Cañada, CA	12	0	0
03 Oct 04	03 Oct 04	U.S. Naval Observatory Laboratory— Flagstaff, AZ	0	500	0
06 Nov 04	11 Nov 04	BAPS Temple—Whittier, CA	0	204	0
10 Nov 04	10 Nov 04	NASA Jet Propulsion Laboratory— Pasadena, CA	5	0	0
29 Nov 04	29 Nov 04	Von E. Mauger Middle School—Middlesex, NJ	0	52	0
02 Dec 04	02 Dec 04	Massachusetts Institute of Technology— Cambridge, MA	130	0	0
04 Dec 04	04 Dec 04	Ventura County Astronomical Society—Ojai, CA	0	70	0
15 Jan 05	15 Jan 05	Eaton Canyon Nature Reserve—Pasadena, CA	0	75	0
20 Jan 05	20 Jan 05	Holmes Elementary School—Lakewood, CA	217	0	0
20 Jan 05	20 Jan 05	Maryland Science Center—Baltimore, MD	0	25	0

23 Jan 05	23 Jan 05	Mount Wilson Observatory—Mount Wilson, CA	0	25	0
25 Jan 05	25 Jan 05	Cascade Optics—Santa Ana, CA	0	6	0
15 Feb 05	15 Feb 05	La Cañada High School—La Cañada, CA	1	0	0
09 Mar 05	09 Mar 05	California State Polytechnic University, Pomona— Pomona, CA	49	0	0
09 Apr 05	09 Apr 05	University of Michigan—Ann Arbor, MI	0	300	0
22 Apr 05	24 Apr 05	La Cañada High School—La Cañada, CA	21	0	0
29 Apr 05	29 Apr 05	NGC Observatory—Frazier Park, CA	9	0	0
13 May 05	13 May 05	California State Polytechnic University, Pomona— Pomona, CA	42	0	0
20 May 05	20 May 05	California State Polytechnic University, Pomona— Pomona, CA	58	0	0
27 May 05	29 May 05	Camp Oakes Young Men's Christian Association (YMCA), Big Bear— Big Bear City, CA	70	1675	0
03 Jun 05	03 Jun 05	Los Angeles Pierce College—Woodland Hills, CA	145	0	0
08 Jun 05	08 Jun 05	Northview Intermediate School—Duarte, CA	102	0	0
10 Jul 05	15 Jul 05	Rochester Riverside Convention Center— Rochester, NY	0	1000	0
12 Jul 05	12 Jul 05	Smithsonian's Cooper-Hewitt National Design Museum—New York, NY	15	0	0
14 Jul 05	14 Jul 05	University of California, Santa Barbara— Santa Barbara, CA	45	0	0
16 Jul 05	16 Jul 05	Eaton Canyon Nature Reserve—Pasadena, CA	0	250	0
21 Sep 05	21 Sep 05	Hayden Planetarium—New York, NY	0	60	0

A308. New England After-School Programs in Space Science

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: After-school programs enable teachers to inspire and enrich their students in ways that transcend the constraints of the heavily scheduled school day. NESSIE personnel have facilitated after-school programs in a variety of space science topics for Boston-area students and their teachers. Several of these programs used the Family ASTRO model of involving NASA space scientists in partnership with community educators. Many of these programs engaged underserved families, scouting groups, and other community organizations.

Lead: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: cclemens@mos.org. Phone: 617-589-0227.

Contact: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: cclemens@mos.org. Phone: 617-589-0227.

Primary URL: <http://hea-www.harvard.edu/astro/BOSTON.html>

Secondary

URL: <http://www.mos.org/nessie>

Partner(s): Astronomical Society of the Pacific

San Francisco, CA

A309. New Horizons: Student Support

Theme(s): Heliophysics, Planetary

Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]

Description: The E/PO office helped the science, engineering, and outreach team become involved in New Horizons E/PO efforts by providing opportunities in support of students (e.g., classroom visits, career day presentations, onsite events and tours, and student mentoring and internships) and by providing the resources necessary for the team members to talk to school groups, provide demonstrations, and conduct classroom activities related to the New Horizons mission. These efforts supported State, local, and national efforts directed toward systemic reform of science, mathematics, and technology education. Also, activities were based on the criteria contained in the national Mathematics, Science, and Technology Standards.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Primary URL: <http://www.pluto.jhuapl.edu>

Secondary

URL: <http://www.jhuapl.edu/>

Scientist(s): Mr. E. Brian Alvarez

Johns Hopkins University Applied Physics
Laboratory

Laurel, MD
Boulder, CO

Dr. Fran Bagenal

University of Colorado, Boulder

Mr. Luke Becker

Johns Hopkins University Applied Physics
Laboratory

Laurel, MD

Ms. Kerri Beisser

Johns Hopkins University Applied Physics
Laboratory

Laurel, MD

Mr. Bruk Berhane

Johns Hopkins University Applied Physics
Laboratory

Laurel, MD

Ms. Alice Bowman

Johns Hopkins University Applied Physics
Laboratory

Laurel, MD

Mr. Mike Buckley	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Linda Butler	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Al Chacos	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Andrew Cheng	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Marc Clayton	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Steve Conrad	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Ann Darrin	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. M. Constance Finney	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Glen Fountain	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Nicola Fox	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Steve Gemeny	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Jesper Gjerloev	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Yanping Guo	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Christopher Hersman	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Patrick Hogue	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Rebecca Horne	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Cynthia Keeling	NASA Independent Verification & Validation Facility (IV&V)	Fairmont, WV
Mr. Stan Kozuch	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. James Leary	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Jeanie McGowan	Maine Tourism Visitors Center	Houlton, ME
Mr. Thomas Milnes	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Jeffrey Moore	NASA Ames Research Center	Moffett Field, CA
Ms. Julie Napp	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Hadi Navid	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Cathy Olkin	Southwest Research Institute	Boulder, CO
Dr. Mark Perry	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Kenneth Potocki	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Anthony Scarpati	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Paul Spudis	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. S. Alan Stern	Southwest Research Institute	Boulder, CO
Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
Mr. James Stratton	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Margaret Strong	Johns Hopkins University	Baltimore, MD
Ms. Taunya Sweet	U.S. Space and Rocket Center	Huntsville, AL
Dr. Elsayed Talaat	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Bob Tomkiewicz	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Kelly Wardlaw	Oklahoma State University	Stillwater, OK
Mr. Gregory Weaver	Johns Hopkins University Applied Physics Laboratory	Laurel, MD

Dr. Harold Weaver	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Andy Webb	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Scott Weidner	Southwest Research Institute	San Antonio, TX
Mr. Puck-Fai Yan	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Dr. Leslie Young	Massachusetts Institute of Technology	Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
27 Oct 04	27 Oct 04	Catholic University of America—Washington, DC	30	0	0
04 Nov 04	04 Nov 04	Carlisle Area Lamberton Middle School—Carlisle, PA	48	0	0
04 Nov 04	04 Nov 04	Oklahoma State University—Stillwater, OK	33	0	0
17 Nov 04	17 Nov 04	Phelps Luck Elementary School—Columbia, MD	131	0	0
24 Jan 05	24 Jan 05	Glenelg Country School—Glenelg, MD	52	0	0
25 Jan 05	25 Jan 05	Glenelg Country School—Glenelg, MD	52	0	0
27 Jan 05	27 Jan 05	Alexander Dawson School—Lafayette, CO	21	0	0
08 Feb 05	08 Feb 05	Forcey Christian School—Silver Spring, MD	67	0	0
09 Feb 05	09 Feb 05	Massachusetts Institute of Technology—Cambridge, MA	21	0	0
18 Feb 05	18 Feb 05	Maine Tourism Visitors Center—Houlton, ME	205	0	0
18 Feb 05	18 Feb 05	University of Colorado, Boulder—Boulder, CO	30	0	0
05 Mar 05	05 Mar 05	Baltimore Museum of Industry—Baltimore, MD	215	0	0
10 Mar 05	10 Mar 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	109	0	0
10 Mar 05	10 Mar 05	Southwest Research Institute—San Antonio, TX	100	0	0
15 Mar 05	15 Mar 05	U.S. Space and Rocket Center—Huntsville, AL	111	0	0
16 Mar 05	16 Mar 05	St. Frances Academy—Baltimore, MD	36	0	0
17 Mar 05	17 Mar 05	U.S. Space and Rocket Center—Huntsville, AL	227	0	0
23 Mar 05	23 Mar 05	Hampton University—Hampton, VA	30	0	0
01 Apr 05	01 Apr 05	University of Colorado, Boulder—Boulder, CO	25	0	0
15 Apr 05	15 Apr 05	Neighborhood Learning Center of Niwot—Niwot, CO	45	0	0
18 Apr 05	18 Apr 05	Hillcrest High School—Idaho Falls, ID	255	0	0
19 Apr 05	19 Apr 05	Johns Hopkins University—Baltimore, MD	100	0	0
21 Apr 05	21 Apr 05	McDaniel College—Westminster, MD	26	0	0
06 May 05	06 May 05	New Oxford Elementary School—New Oxford, PA	323	0	0
10 May 05	10 May 05	Stinson Junior High School—San Antonio, TX	26	0	0
13 May 05	13 May 05	Silver Spring Day School—Silver Spring, MD	15	0	0
16 May 05	16 May 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	79	0	0
20 May 05	20 May 05	Steubing Elementary School—San Antonio, TX	26	0	0
25 May 05	25 May 05	Crofton Elementary School—Crofton, MD	52	0	0
27 May 05	27 May 05	Castro Elementary School—Mountain View, CA	32	0	0
28 May 05	28 May 05	New Mexico Technical College—Socorro, NM	52	0	0
01 Jun 05	01 Jun 05	Towson High School—Towson, MD	124	0	0
06 Jun 05	12 Aug 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	1	0	0
16 Jun 05	12 Aug 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	4	0	0
21 Jun 05	21 Jun 05	Eleanor Roosevelt High School—Greenbelt, MD	24	0	0
25 Jun 05	25 Jun 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	25	0	0
27 Jun 05	08 Jul 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	36	0	0
11 Jul 05	11 Jul 05	Queen Anne School—Upper Marlboro, MD	39	0	0
14 Jul 05	14 Jul 05	Fairmont State College—Fairmont, WV	30	0	0
12 Aug 05	12 Aug 05	Choctaw County High School—Butler, AL	78	0	0
12 Sep 05	12 Sep 05	Easton Elementary School—Easton, ME	28	0	0
22 Sep 05	22 Sep 05	Alexander Dawson School—Lafayette, CO	21	0	0
22 Sep 05	22 Sep 05	Pointer's Run Elementary School—Clarksville, MD	27	0	0

A310. Odyssey of the Mind

Theme(s): Earth Science

Msn/Prgm: OM[B22]

Description: Odyssey of the Mind is the largest creative problem-solving competition in the world. For 26 years, it has been promoting team effort, cooperation, communication, and problem-solving and organizational skills in students from kindergarten through college. It is estimated that approximately 450,000 students participate in the problems each year. Through the participation of those students, along with their parents, coaches, teachers, administrators, siblings, and friends, NASA will raise the awareness of its science research for a massive amount of people internationally. Each year, the Odyssey of the Mind program develops a set of five problems. Teams of five to seven students work under the guidance of coaches to develop solutions to a single problem they choose. These problems are open-ended and require management skills, planning, and budgeting because there is a \$100 limit on supplies. Teams create solutions that are imaginative, original, and ingenious, and they present them in a performance that they design and create. All props, costumes, and other elements necessary to bring the solution to life are entirely the work of the students. Competitions are split into four divisions, and they are held at the local, regional, and State/country levels. Winners at the State/country levels are given the opportunity to participate in the World Finals, where over 5,000 students compete against each other for the coveted awards in each division. Participants include teams from practically every State in the United States, as well as Argentina, Australia, Belarus, Benelux, Canada, China, Germany, Hong Kong, Hungary, Japan, Kazakhstan, Lithuania, Moldova, Poland, Russia, Siberia, Singapore, Slovakia, the United Kingdom, and West Africa. Odyssey of the Mind is one of a very few organizations that can carry the NASA message to such a broad audience in such a positive and meaningful way, with the potential of influencing students to become the scientists and engineers that will be needed to carry forward NASA's Mission and Vision into the future.

Lead: Dr. Michael King, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: michael.d.king@nasa.gov. Phone: 301-614-5634.Primary URL: <http://www.odysseyofthemind.com>**A311. RHESSI: Classroom Visits and Student Support**

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]

Description: RHESSI scientists and E/PO personnel visit classrooms, after-school programs, and other student groups to give talks on the RHESSI mission and its science. During these visits, the classes may participate in various educational activities.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu. Phone: 510-643-2178.Primary URL: http://cse.ssl.berkeley.edu/hessi_epo/

Scientist(s): Dr. Bryan Mendez University of California, Berkeley Berkeley, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 May 05	03 May 05	Fern Bacon Middle School—Sacramento, CA	18	0	0

A312. S2N2: Informal Space Science Opportunities for Youth

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: The major goal of the Space Science Network Northwest (S2N2) Informal Education Opportunities for Youth program is to increase opportunities for kids of ages 5-18 to be exposed to space science in out-of-school settings. Our venues and partners are as varied as the "out-of-school-time" landscape. Our programs are sometimes targets of opportunity for our area. For example, the Wyoming Astronomy Camp is a partnership between the University of Wyoming Physics and Astronomy Department and the Boys and Girls Clubs that S2N2 has brought to maturity. The camp has existed for 3 years. S2N2 nurtures the partnerships and helps ensure that the program keeps making sense for the kids that it is intended to serve. Another "mature" partnership is between MESA, a program for minority youth, and S2N2 Washington. MESA brings minority students who are high school juniors professing an interest in a SMET major to the University of Washington each summer, and members of S2N2 talk with them (partnering with space scientists) about careers. As can be seen from the previous examples, S2N2 tries to promote youth events for underserved populations such as minorities, girls, and special-needs students. We also would like to promote the involvement of minority space scientists in our events. For example, this year we had a blind space scientist giving a talk about his work to a group of teenagers in an informal program.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.Primary URL: <http://www.s2n2.org>

Scientist(s):	Dr. Dave Allen	University of Wyoming	Laramie, WY
	Mr. Kirk Astroth	4-H Montana	Bozeman, MT
	Dr. Michael Brotherton	Wyoming Department of Education	Cheyenne, WY
	Ms. Amy Brunsvold	Montana State University	Bozeman, MT
	Dr. Kent Cullers	Institute for Astronomy	Hilo, HI

	Dr. Daniel Dale	University of Wyoming	Laramie, WY
	Ms. Angela DesJardins	Montana State University	Bozeman, MT
	Ms.Carolynn Garcia	University of Wyoming	Laramie, WY
	Dr. John Getty	Montana State University	Bozeman, MT
	Ms. Margie Haak	Oregon State University	Corvallis, OR
	Ms. Emily Hall	University of Wyoming	Laramie, WY
	Dr. Rick Kang	Pine Mountain Observatory	Eugene, OR
	Dr. Henry Kobulnicky	University of Wyoming	Laramie, WY
	Dr. Christine Lamanna	University of Wyoming	Laramie, WY
	Ms. Catherine Lanier	Oregon State University	Corvallis, OR
	Mr. Travis Lurance	University of Wyoming	Laramie, WY
	Dr. Julie Lutz	University of Washington	Seattle, WA
	Ms. Emily May	Boys & Girls Clubs of Wyoming	Casper, WY
	Dr. Donna Minton	Montana NASA Space Grant	Bozeman, MT
	Mr. John Ophus	University of Idaho	Moscow, ID
	Ms. Cassandra Paul	University of Wyoming	Laramie, WY
	Dr. Mike Pierce	University of Wyoming	Laramie, WY
	Ms. Laura Portscheller	University of Wyoming	Laramie, WY
	Mr. Michael Poser	Montana State University	Bozeman, MT
	Ms. Darlette Powell	University of Washington	Seattle, WA
	Ms. Christina Roderick	University of Wyoming	Laramie, WY
	Ms. Debbie Shanklin	Montana State University	Bozeman, MT
	Mr. Chad Sharpe	Boys & Girls Clubs of Wyoming	Casper, WY
	Mr. Erick Smith	University of Wyoming	Laramie, WY
	Dr. Maritza Tavaréz	University of Washington	Seattle, WA
	Dr. Dan Tyson	University of Wyoming	Laramie, WY
Partner(s):	Oregon Space Grant Consortium		Corvallis, OR
	Washington Space Grant Consortium		Seattle, WA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
22 Oct 04	22 Oct 04	Institute for Astronomy—Hilo, HI	54	0	0
18 Jan 05	18 Jan 05	Fairwood Elementary School—Renton, WA	120	0	0
01 Apr 05	01 Apr 05	Encampment K–12 School—Encampment, WY	15	0	0
12 Apr 05	13 Apr 05	Oregon State University—Corvallis, OR	1222	789	2
13 May 05	13 May 05	Museum at Warm Springs, The— Warm Springs, OR	170	0	0
12 Jun 05	12 Jun 05	Montana State University—Bozeman, MT	124	0	0
19 Jun 05	01 Jul 05	University of Wyoming—Laramie, WY	41	0	0
20 Jun 05	20 Jun 05	University of Idaho—Moscow, ID	101	0	0
12 Jul 05	14 Jul 05	4-H Montana—Bozeman, MT	3	29	0
13 Jul 05	13 Jul 05	4-H Montana—Bozeman, MT	3	150	0
15 Jul 05	15 Jul 05	University of Washington—Seattle, WA	22	0	0

A313. Sally Ride Science Festival

Theme(s): Planetary
Msn/Prgm: MARSSB[B39]
Description: The Mid-Atlantic Region Space Science Broker recruited a science educator/speaker and co-presented two workshops demonstrating the four principles of flight for middle school girls.
Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.
E-mail: lruberg@cet.edu. Phone: 304-243-2480.
Contact: Dr. Bear Ride, Imaginary Lines, Los Angeles, CA 90041. E-mail: bear@ImaginaryLinesInc.com.
Phone: 626-644-5750.
Primary URL: <http://www.sallyridefestivals.com/05pitt0507/index.shtml>
Scientist(s): Dr. Sally Ride Imaginary Lines Los Angeles, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 May 05	07 May 05	Sally Ride Science Festival—Pittsburgh, PA	22	0	0

A314. Seeing, Measuring, and Researching the Turbulent Sun (SMARTS)

Theme(s): Heliophysics
Msn/Prgm: SRT[B28]
Description: SMARTS is designed as an authentic h-alpha solar research project for high school astronomy students and offers many varied public solar-viewing sessions in the region. SMARTS has an h-alpha telescope, charge-coupled device (CCD), and laptop computer system for student use. H-alpha telescope images will be captured and collected on disks to be analyzed later in the classroom using image-processing techniques. Public h-alpha viewing sessions are held throughout the year at the Museum of the Rockies' annual "Astro Fair, at Yellowstone National Park's "Old Faithful Visitor Center, at the "Montana Starwatch" annual event, and at various events held at Montana State University. SMARTS has the capability to continue for many years into the future.

Lead: Dr. Charles Kankelborg, Montana State University, Bozeman, MT 59717.

E-mail: kankel@solar.physics.montana.edu. Phone: 406-994-7853.

Partner(s): Museum of the Rockies

Bozeman, MT

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Jan 05	10 Jul 05	Bozeman High School—Bozeman, MT	110	1405	0

A315. SOHO: Support for Educational Outreach

Theme(s): Heliophysics

Msn/Prgm: SOHO[B84]

Description: For years, distance-learning programs have dotted the landscape of K–12 classrooms. Whether in the form of videoconferencing or interactive Internet-based activities, these opportunities have afforded educators with numerous resources that would not otherwise be available to students. Generally speaking, videoconferencing applications have taken on one of two forms: class exchanges or field trips. The NASA Endeavour Program, cosponsored by the Northeastern Educational Intermediate Unit (NEIU), NASA's Solar and Heliospheric Observatory, and the Education Programs Office at GSFC, does not really fit into either of these categories. It is a unique application of videoconferencing that blends direct instruction, performance-based learning, and direct interaction with NASA scientists through videoconferencing. Students are provided with a real-life NASA problem statement and sufficient background information to solve the problem. Subsequently, student teams work with the available information and utilize their own scientific background knowledge to develop creative solutions to the problems. The student teams are afforded a videoconference connection to give their solution to the NASA personnel that actually solved the problem. The NASA panel then gives the students feedback on their solution. The Lead: problem is the SOHO/Leonid possible collision. During this program, teachers are given the content and tools needed to make a real-life connection to their curriculum. The intervention attempts to increase teacher content knowledge and pedagogy in the areas of physical science, problem solving, and inquiry and design. Teachers work directly with NASA scientists, engineers, and technicians through onsite and distance-learning activities. The activities are meant to provide teachers with real-life applications of content area concepts and provide a depth of understanding of these concepts.

Lead: Dr. Steele Hill, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: shill@grace.nascom.nasa.gov. Phone: 301-286-6452.

Contact: Mr. Dennis Christopher, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: dennis@grace.nascom.nasa.gov.

Primary URL: <http://sohowww.nascom.nasa.gov/>

Secondary

URL: <http://son.gsfc.nasa.gov>

Scientist(s):		
Mr. John C. Beck	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. John G. Beck	Stanford University	Stanford, CA
Ms. Shannon Lee	Chabot Community College	Hayward, CA
Mr. Ray Mitchell	Stanford University	Stanford, CA
Mr. Alan Roche	Stanford University	Stanford, CA
Ms. Deborah Scherrer	Stanford University	Stanford, CA
Dr. Philip Scherrer	Stanford University	Stanford, CA
Mr. Hao Thai	Stanford University	Stanford, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Stanford University—Stanford, CA	0	40000	0
13 Nov 04	13 Nov 04	Presentation High School—San Jose, CA	36	0	0
19 Feb 05	19 Feb 05	Presentation High School—San Jose, CA	59	0	0
27 Jun 05	29 Jun 05	Lawrence Livermore National Laboratory—Livermore, CA	20	0	0
26 Jul 05	28 Jul 05	American Wildlife School—Rocky Mountain Retreat Center, CO	40	0	0
08 Aug 05	08 Aug 05	Stanford University—Stanford, CA	16	0	0
12 Aug 05	12 Aug 05	Stanford University—Stanford, CA	15	0	0

A316. Space Science for the Blind and Visually Impaired

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: DePaul B/F[B37], SERCH B/F[B41]

Description: Our goals are to create opportunities for blind students to engage in SMD science activities and to motivate them to consider science, and especially NASA, as a career option.

Lead: Dr. Bernhard Beck-Winchatz, DePaul University, Chicago, IL 60604. E-mail: bbeck@codor.depaul.edu. Phone: 773-325-4545.

Primary URL: <http://www.nfb.org/nfbtrti/enter.htm>

Scientist(s): Dr. Bernhard Beck-Winchatz DePaul University

Chicago, IL
Baltimore, MD

Partner(s): National Federation of the Blind

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Jul 05	17 Jul 05	National Federation of the Blind— Baltimore, MD	15	0	0
04 Aug 05	04 Aug 05	National Federation of the Blind— Baltimore, MD	16	0	0

A317. STEREO/IMPACT: Classroom Visits and Student Support

Theme(s): Heliophysics

Msn/Prgm: STEREO[B88]

Description: STEREO is the third of five Solar Terrestrial Probes. This mission will obtain simultaneous images of the Sun from two spacecraft and build a 3-D picture of coronal mass ejections (CMEs) and the complex structures around them. STEREO will also study the propagation of disturbances through the heliosphere and their effects at Earth orbit. The STEREO E/PO program participates in the Sun-Earth Connection Education Forum-sponsored workshops that meet the needs of educators at all grade levels. We present these workshops to inservice educators to teach them about the most recent and relevant solar and STEREO science discoveries, which they will then teach in their classrooms. Mission scientists participate in the workshops to share the science content. Education specialists provide integrated, hands-on activities to demonstrate science applications in the classroom. The missions also provide images and animations to support programs that have been developed by the science centers specifically for educators and for the general public.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu.
Phone: 510-643-7273.

Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu.
Phone: 510-643-2178.

Primary URL: <http://cse.ssl.berkeley.edu/impact/>

Scientist(s):	Mr. Luke Becker	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Kerri Beisser	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Bruk Berhane	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Linda Butler	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Marc Clayton	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Ron Denissen	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Robert Dobyns	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Andy Driesman	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. Madhulika Guhathakurta	NASA Headquarters Science Mission Directorate	Washington, DC
	Mr. Carl Herrmann	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Jack Hunt	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Paul Lafferty	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Dr. Timothy Lippa	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Kristi Marren	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Hadi Navid	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Anthony Parker	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Ed Reynolds	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Elliott Rodberg	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Bob Tomkiewicz	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Andy Webb	Johns Hopkins University Applied Physics Laboratory	Laurel, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Oct 04	15 Oct 04	Trinity Nursery School—Hanover, PA	0	45	0
20 Oct 04	20 Oct 04	Immaculate Conception School—Towson, MD	23	0	0

21 Oct 04	21 Oct 04	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	108	0	0
14 Nov 04	14 Nov 04	Baltimore Polytechnic Institute—Baltimore, MD	26	0	0
22 Feb 05	22 Feb 05	Martin Meylin Middle School—Lampeter, PA	254	0	0
04 Mar 05	04 Mar 05	New Oxford Middle School—New Oxford, PA	254	0	0
13 Apr 05	13 Apr 05	Archbishop Spalding High School—Severn, MD	42	0	0
29 Apr 05	29 Apr 05	Laurel High School—Laurel, MD	73	0	0
06 Jun 05	12 Aug 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	2	0	0
15 Jun 05	15 Jun 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	25	0	0
30 Jun 05	30 Jun 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	16	0	0
15 Jul 05	15 Jul 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	20	0	0

A318. Students' Cloud Observations On-Line (S'COOL)

Theme(s): Earth Science

Msn/Prgm: S'COOL[B24]

Description: The goal of the S'COOL Project is to involve K–12 students in authentic science research by making ground truth observations of clouds while a NASA satellite instrument passes overhead. The student data are used by the scientists as part of the validation program and are also available to students for their own scientific inquiry. The project is very accessible, requiring no specialized equipment. All materials needed to participate in this project are available on the Web site, which is partially translated into multiple languages to facilitate participation by students in more than 60 countries around the world.

Lead: Dr. Lin Chambers, NASA Langley Research Center, Hampton, VA 23681. E-mail: l.h.chambers@larc.nasa.gov. Phone: 757-864-4371.

Primary URL: <http://scool.larc.nasa.gov>

Secondary

URL: http://asd-www.larc.nasa.gov/SCOOL/BAMS_cover.html

Scientist(s):	Dr. Lin Chambers	NASA Langley Research Center	Hampton, VA
	Ms. Joyce Fischer	Science Applications International Corporation (SAIC)	Hampton, VA
	Ms. Susan Moore	Science Applications International Corporation (SAIC)	Hampton, VA
	Mr. Roberto Sepulveda	NASA Langley Research Center	Hampton, VA
	Mr. David Young	NASA Langley Research Center	Hampton, VA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
10 Oct 04	30 Sep 05	NASA Langley Research Center—Hampton, VA	4393	0	193000

A319. Sun-Earth Connection Education Forum (SECEF): Formal Education Student Support

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36]

Description: Sun-Earth Connection scientists and education specialists share the excitement of the science of the Sun with students in general assemblies, their classrooms, and distance-learning opportunities.

Lead: Ms. Elaine Lewis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lewis@mail630.gsfc.nasa.gov. Phone: 301-286-3337.

Primary URL: <http://sunearthday.nasa.gov>

Secondary

URL: <http://son.nasa.gov>

Scientist(s):	Dr. Isabel Hawkins	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA
	Mr. Igor Ruderman	University of California, Berkeley	Berkeley, CA
	Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA
	Ms. Jackie Wong	University of California, Berkeley	Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Jan 05	20 Jan 05	Hoover Elementary School—Oakland, CA	12	0	0
16 Apr 05	16 Apr 05	Castro Valley Unified School District—Castro Valley, CA	0	300	0

A320. Swift General Student Workshops

Theme(s): Astrophysics

Msn/Prgm: Swift[B57]

Description: Swift Student Workshops are performed in classrooms and to audiences that are primarily composed of students. Some activities are performed by Swift Educator Ambassadors. These Educator Ambassadors are part of the SEU Educator Ambassador program, coordinated by the E/PO group at Sonoma State University. The Educator Ambassadors are trained biyearly at SSU to help develop, test, disseminate, and conduct workshops using materials from all SEU missions. Some presentations are also conducted by SSU E/PO group personnel. The presentations typically contain information about the Swift satellite, gamma-ray bursts, and the electro-magnetic spectrum. In addition, we have sent materials to classrooms and schools for students to use when they have requested the materials through our Web site.

Lead: Ms. Sarah Silva, Sonoma State University, Rohnert Park, CA 94928. E-mail: sarah@universe.sonoma.edu. Phone: 707-664-2244.

Primary URL: <http://swift.gsfc.nasa.gov>

Secondary URL: <http://swift.sonoma.edu>

Scientist(s): Mr. Thomas Arnold State College High School State College, PA
Ms. Bruce Hemp Fort Defiance High School Fort Defiance, VA
Ms. Sarah Silva Sonoma State University Rohnert Park, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Mar 05	05 Mar 05	Expanding Your Horizons—Sonoma County Conference—Santa Rosa, CA	0	500	0
02 Apr 05	02 Apr 05	Space Day at Penn State—University Park, PA	500	0	0
10 Jul 05	15 Jul 05	Bob Jones University—Greenville, SC	36	0	0
24 Jul 05	24 Jul 05	Chatham Hall School—Chatham, VA	48	0	0

A321. TIMED: Student Events

Theme(s): Heliophysics

Msn/Prgm: TIMED[B89]

Description: The E/PO office helped the science, engineering, and outreach team become involved in E/PO efforts by providing opportunities in support of students (e.g., classroom visits, career day presentations, onsite events and tours, and student mentoring and internships). Resources necessary for the team members to talk to school groups, provide demonstrations, and conduct classroom activities related to the TIMED mission were provided by the E/PO office. These efforts supported State, local, and national efforts directed toward systemic reform of science, mathematics, and technology education. Also, activities were based on the criteria contained in the national Mathematics, Science, and Technology Standards.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099. E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099. E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.timed.jhuapl.edu/>

Scientist(s): Dr. Geoff Crowley Southwest Research Institute San Antonio, TX
Ms. Dianne Robinson Hampton University Hampton, VA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	58	0	0
16 Aug 05	16 Aug 05	Southwest Research Institute—San Antonio, TX	1	0	0

A322. TIMED: Student Support

Theme(s): Heliophysics, Planetary

Msn/Prgm: TIMED[B89]

Description: The E/PO office helped the science, engineering, and outreach team become involved in TIMED E/PO efforts and provided opportunities in support of students (e.g., classroom visits, career day presentations, onsite events and tours, and student mentoring and internships), along with resources necessary for the team members to talk to school groups, provide demonstrations, and conduct classroom activities related to the TIMED mission. These efforts supported State, local, and national efforts directed toward systemic reform of science, mathematics, and technology education. Also, activities were based on the criteria contained in the national Mathematics, Science, and Technology Standards.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099. E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099. E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.timed.jhuapl.edu/>

Secondary URL: <http://www.spaceacademy.jhuapl.edu>

Scientist(s): Dr. Geoff Crowley Southwest Research Institute San Antonio, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 May 05	16 Aug 05	Southwest Research Institute—San Antonio, TX	1	0	0

A323. TRACE: Support for Educational and Public Outreach

Theme(s): Heliophysics

Msn/Prgm: TRACE[B80]

Description: Scientists at Lockheed Martin visit schools in their community to talk to students about the wonders and importance of studying science and mathematics. They also distribute materials to the students and teachers.

Lead: Dr. Ed DeLuca, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: deluca@head.cfa.harvard.edu. Phone: 617-496-7725.Primary URL: <http://sunland.gsfc.nasa.gov/smex/trace/>

Scientist(s): Ms. Zoe Frank Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Partner(s): Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Lockheed Martin Solar and Astrophysics Laboratory—Palo Alto, CA	62	0	0

A324. TRACE: Support for “Expanding Your Horizons” Workshop

Theme(s): Heliophysics

Msn/Prgm: TRACE[B80]

Description: The Montana State University (MSU) Burns Telecommunication Center hosted the “Expanding Your Horizons” workshop. This workshop was geared toward young girls (6th-8th grade) to increase their interest in science and math. A member from the Transition Region and Coronal Explorer (TRACE) team presented a workshop on solar observations with TRACE. The students were given a chance to ask scientific questions and then decide what observations TRACE would make to answer those questions.

Lead: Ms. Patricia Jibben, Montana State University, Bozeman, MT 59717. E-mail: jibben@physics.montana.edu.

Phone: 406-994-7375.

Primary URL: <http://solar.physics.montana.edu/EYH/>

Scientist(s): Ms. Patricia Jibben Montana State University Bozeman, MT

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Apr 05	16 Apr 05	Montana State University—Bozeman, MT	40	0	0

A325. TRACE: Support of Interns at SAO

Theme(s): Heliophysics

Msn/Prgm: TRACE[B80]

Description: The TRACE project at Smithsonian Astrophysical Observatory (SAO) supports both high school and college interns. The interns are given a variety of projects to enhance both their computer skills and their understanding of basic solar physics.

Contact: Dr. Mark Weber, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: mweber@head.cfa.harvard.edu. Phone: 617-495-7139.Primary URL: <http://cfa-www.harvard.edu/saohome.html>

Scientist(s): Dr. Edward DeLuca Harvard-Smithsonian Center for Astrophysics Cambridge, MA

Dr. Mark Weber Harvard-Smithsonian Center for Astrophysics Cambridge, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Jun 05	02 Aug 05	Harvard-Smithsonian Center for Astrophysics Cambridge, MA	1	0	0
27 Jun 05	02 Sep 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	1	0	0

A326. TRACE: Support of Student Interns

Theme(s): Heliophysics

Msn/Prgm: TRACE[B80]

Description: The TRACE project at Lockheed Martin Solar and Astrophysics Laboratory (LMSAL) participates in the Palo Alto Unified School District Work Experience Program, which brings high school students into the research lab to work part-time during the school year and full-time during the summer. Students work with a mentor in computing and data analysis, video and DVD movie production, Web programming, resource tracking with spreadsheets, and sometimes even original research leading to publication. Many graduates of the work experience program at LMSAL have entered into careers in science or engineering.

Lead: Dr. Richard Nightingale, Lockheed Martin Solar and Astrophysics Laboratory, Palo Alto, CA 94304.

E-mail: nightingale@lmsal.com. Phone: 650-424-3293.

Scientist(s): Dr. Richard Nightingale Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Lockheed Martin Solar and Astrophysics Laboratory—Palo Alto, CA	5	0	0

A327. Ulysses: Speakers Bureau

Theme(s): Heliophysics

Msn/Prgm: Ulysses[B71]

Description: Members of the Ulysses Team provide speakers, mission overview, images, and activities for K–14 students.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.Primary URL: <http://ulysses.jpl.nasa.gov>

Scientist(s):	Mr. Nigel Angold	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Choong Chan	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Colin Golding	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Bruce McKibben	University of Chicago	Chicago, IL
	Dr. Charles Smith	University of New Hampshire	Durham, NH
	Dr. Steven Suess	NASA Marshall Space Flight Center	Marshall Space Flight Center, AL
	Ms. Aimee Whalen	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Oct 04	16 Oct 04	Mount San Antonio College—Walnut, CA	76	0	0
07 Dec 04	07 Dec 04	Hillside Elementary School—Los Angeles, CA	28	2	0
27 Feb 05	27 Feb 05	Kidspace—Pasadena, CA	60	0	0
02 Mar 05	02 Mar 05	NASA Marshall Space Flight Center— Marshall Space Flight Center, AL	57	0	0
01 Jun 05	30 Jun 05	University of New Hampshire—Durham, NH	32	0	0
14 Jun 05	16 Aug 05	University of New Hampshire—Durham, NH	28	0	0

A328. Voyager: Classroom Visits

Theme(s): Heliophysics

Msn/Prgm: Voyager[B72]

Description: The Voyager Project and Science Team members make classroom visits regularly to local elementary schools, middle schools, high schools, and community colleges, giving lectures and leading hands-on activities.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.Primary URL: <http://voyager.jpl.nasa.gov>

Scientist(s):	Mr. Donald Heller	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Lawrence Josbeno	Corning Community College	Corning, NY
	Mr. Ed Massey	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Richard Shope	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Thomas Weeks	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Dec 04	03 Dec 04	Corning Community College—Corning, NY	61	0	0
03 Dec 04	03 Dec 04	El Dorado Elementary School—Sylmar, CA	42	0	0
17 Mar 05	17 Mar 05	Pinecrest Elementary School— Thousand Oaks, CA	63	0	0
02 Jun 05	02 Jun 05	Longfellow Elementary School—Riverside, CA	407	0	0

A329. West Virginia Eastern Panhandle Regional Science Fair

Theme(s): Astrophysics

Msn/Prgm: MARSSB[B39], HEASARC[B65]

Description: The Mid-Atlantic Region Space Science Broker (MARSSB) and Dr. James Lochner from the Goddard Space Flight Center participated in the Space Science Workshop for high school students at the West Virginia Eastern Panhandle Regional Science Fair. The event included 114 students and 6 teachers and exposed students to current research being conducted by Dr. Lochner. MARSSB developed and analyzed the student and teacher evaluations.

Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.

E-mail: lruberg@cet.edu. Phone: 304-243-2480.Primary URL: <http://marssb.cet.edu>

Secondary

URL: <http://www.potomacstatecollege.edu/>

Scientist(s):	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV
Partner(s):	Potomac State College		Keyser, WV

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Mar 05	15 Mar 05	Potomac State College—Keyser, WV	61	0	0

A330. "What Is Your Cosmic Connection to the Elements?": Student Presentation

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65], ACE[B73]
 Description: This student workshop introduces students to the cosmic origins of the chemical elements-how the elements were created by the Big Bang, stellar processes, cosmic-ray interactions, and other processes. Participants engage in discussion and activities about the elemental composition of the universe and their own "cosmic connections" between elements on Earth and their origins in space.
 Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Primary URL: <http://imagine.gsfc.nasa.gov/docs/teachers/elements/elements.html>

Scientist(s): Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Nov 04	19 Nov 04	Kuss Middle School—Fall River, MA	26	0	0
15 Mar 05	15 Mar 05	Potomac State College—Keyser, WV	86	0	0

A331. WMAP: Cooperative Satellite Learning Project (CSLP)

Theme(s): Astrophysics

Msn/Prgm: WMAP[B58]

Description: WMAP works with Old Bridge High School throughout the year by providing human, electronic, and curricular resources for the CSLP program. The objectives of the CSLP are to motivate students in the K-12 system to pursue science, engineering, and math careers in the space business. It also demonstrates the application of technology and the integration of a variety of technical disciplines into a complex system of ground- and space-based segments called the "end-to-end" mission system. Further, through special projects performed by small, focused student groups, the participants learn such skills as Leadership, planning, organization, speech and presentation, and group interaction.

Lead: Dr. David Spergel, Princeton University, Princeton, NJ 08544-1001. E-mail: dns@astro.princeton.edu.
 Phone: 609-258-3589.

Primary URL: <http://map.gsfc.nasa.gov>

Secondary

URL: <http://clsp.gsfc.nasa.gov>

A332. Wyoming Space Camp

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: Wyoming Astrocamp was held June 17-25, 2005, involving 20 junior high students from around Wyoming and 18 junior high and high school students who are part of the Wyoming Boys & Girls Clubs and the Cheyenne Youth Alternatives program. Three high school teachers also participated: Michelle Miller and Michelle Wistisen, both of Casper, WY, and Matt Bryant of Akron, OH. Preservice teacher Elli Toskey participated as well. Matt developed a new activity called "Digital Imaging Experiments for High School Science" for use at Astrocamp and in high school classes. Approximately 15 undergraduate students or graduate students also participated by leading activities and serving as chaperones for the campers. Student activities included building and using spectrographs, telescopes, rockets, and an underwater scuba spacecraft assembly exercise. Approximately 10 students were of Latino or African or Native American descent. Pre- and postcamp assessment surveys were conducted, and focus group exit interviews were conducted with the students in small groups with the assistance of the University of Wyoming's Elbogen Center for Teaching and Learning.

Lead: Dr. Henry Kobulnicky, University of Wyoming, Laramie, WY 82071-3905. E-mail: chipk@uwyo.edu. Phone: 307-766-2982.

Scientist(s):	Dr. Michael Brotherton	Wyoming Department of Education	Cheyenne, WY
	Dr. Daniel Dale	University of Wyoming	Laramie, WY
	Dr. Henry Kobulnicky	University of Wyoming	Laramie, WY
Partner(s):	Boys & Girls Clubs of Wyoming		Casper, WY

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
17 Jun 05	25 Jun 05	University of Wyoming—Laramie, WY	61	0	0

A333. XMM-Newton: High-Energy Student Presentations

Theme(s): Astrophysics

Msn/Prgm: XMM[B69]

Description: XMM-Newton public presentations include lectures in classrooms that discuss the results of this mission.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
 Phone: 707-664-2655.

Primary URL: <http://xmm.sonoma.edu/>

Secondary

URL: <http://xmm.sonoma.edu/program.html>

Scientist(s): Mr. Tom Estill Chabot Space and Science Center Oakland, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
18 May 05	18 May 05	Scenic Middle School—Livermore, CA	87	0	0

11 Jul 05	15 Jul 05	Chabot Space and Science Center— Oakland, CA	6	4	0
03 Aug 05	03 Aug 05	Chabot Space and Science Center— Oakland, CA	13	0	0

A334. Young Engineers and Scientists (YES) Program

Theme(s): Heliophysics

Msn/Prgm: ACE[B73], MMS[B86]

Description: The Young Engineers and Scientists (YES) Program is a community partnership between Southwest Research Institute (SwRI) and local high schools in San Antonio. It provides talented high school juniors and seniors with a bridge between classroom instruction and real-world research experiences in physical sciences, information sciences, and engineering. YES consists of two parts: (1) an intensive 3-week summer workshop, held at SwRI, in which students experience the research environment firsthand; develop skills and acquire tools for solving scientific problems; attend minicourses and seminars on electronics, C++ programming, the Internet, careers, science ethics, the social impact of technology, and other topics; and select their individual research project with their mentor (SwRI staff member) to be completed during the academic year and (2) a collegial mentorship in which students complete individual research projects under the guidance of their mentors and teachers during the academic year and earn honors credit. At the end of the school year, students publicly present and display their work, acknowledging their accomplishments and spreading career awareness to other students and teachers. YES has been highly successful during the past 13 years. All YES graduates have entered college several work or have worked for SwRI; and three scientific publications have resulted. Student, teacher, and mentor evaluations have been very positive, indicating the effectiveness of YES regarding the students' academic preparation and choice of college majors.

Contact: Dr. Heather Elliott, Southwest Research Institute, San Antonio, TX 78228-0510.
E-mail: helliott@swri.edu. Phone: 210-522-6909.

Primary URL: <http://yesserver.space.swri.edu/>

Scientist(s): Dr. Heather Elliott Southwest Research Institute San Antonio, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
13 Jun 05	07 Jul 05	Southwest Research Institute—San Antonio, TX	15	0	0

INFORMAL EDUCATION

Informal Education Resources

A335. "Alien Earths" Traveling Exhibit

Theme(s): Astrophysics

Msn/Prgm: SSI B/F[B42], HST[B49], Kepler[B50], SST[B52], SOFIA[B53], Navigator Program[B59], NAI[B62]

Description: The Space Science Institute has developed a 3, 000-square-foot traveling exhibit, called Alien Earths, that brings origins-related research and discoveries to students and the American public. Where did we come from? Are we alone? These age-old questions form the basis of NASA's Origins Program, a series of missions spanning the next 20 years that will use a host of space- and ground-based observatories to understand the origin and development of galaxies, stars, planets, and the conditions necessary to support life. Alien Earths has four interrelated exhibit areas: Our Place in Space, Star Birth, Planet Quest, and Search for Life. Exhibit visitors explore the awesome events surrounding the birth of stars and planets; they join scientists in the hunt for planets outside our solar system, including those that may be in habitable zones around other stars; and, finally, they learn about the wide range of conditions for life on Earth and how scientists are looking for signs of life beyond Earth. Visitors also learn about the tools scientists use, such as space-based and ground-based telescopes, to improve our understanding of the cosmos.

Lead: Ms. Lisa Curtis, Space Science Institute, Boulder, CO 80301. E-mail: curtisl@colorado.edu.
Phone: 720-974-5821.

Primary URL: <http://www.alieneartths.org/>

Scientist(s):	Dr. Whitney Barb	Space Science Institute	Boulder, CO
	Dr. Mary Barsony	Space Science Institute	Boulder, CO
	Dr. Brad Bebout	NASA Ames Research Center	Moffett Field, CA
	Dr. Paul Dusenbery	Space Science Institute	Boulder, CO
	Mr. James Harold	Space Science Institute	Boulder, CO
	Dr. Steve Kilston	Ball Aerospace Technologies Corporation	Boulder, CO
	Dr. Cherilynn Morrow	Space Science Institute	Boulder, CO
	Dr. Seth Shostak	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Dr. John Spear	University of Colorado, Boulder	Boulder, CO
	Dr. Michelle Thaller	California Institute of Technology (Caltech)	Pasadena, CA
Partner(s):	California Institute of Technology (Caltech)		Pasadena, CA
	Denver Museum of Nature and Science		Denver, CO
	Lawrence Hall of Science		Berkeley, CA
	Search for Extraterrestrial Intelligence (SETI) Institute		Mountain View, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Feb 05	30 Apr 05	Lawrence Hall of Science—Berkeley, CA	0	35000	0

A336. Chandra E/PO Grant: Stellar Evolution Planetarium Show at the Science Museum of Virginia

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: By developing and producing a new planetarium show at the Science Museum of Virginia, this project introduces visitors to stellar evolution and stellar populations. The show introduces the science content through the interactions between a detective looking for a young, missing star and Stella, a black hole who used to be a big star! Stella was featured in a planetarium show on black holes in the spring of 2004, and she returns to tell the stories of other stars in her super star cluster neighborhood: their births, lives, and deaths. The script and visuals developed for the show will be made available on CD-ROM to members of the International Planetarium Society and the Digistar User's Group. Participants attending the Association of Science and Technology Centers annual convention, to be hosted by the Museum in October 2005, will have an opportunity to view the show. In addition to the planetarium show, the staff of the Science Museum are working with the scientists to develop a study guide and classroom exercises that link the show to the Virginia Standards of Learning.

Lead: Mr. Gregory Sivakoff, University of Virginia, Charlottesville, VA 22903. E-mail: grs8g@virginia.edu.Primary URL: <http://www.smv.org>

Secondary

URL: http://www.astro.virginia.edu/public_outreach/

Partner(s): Science Museum of Virginia

Richmond, VA

A337. "Cosmic Questions: Our Place in Space and Time" Traveling Exhibition

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SEU[B35], CXO[B44], GLAST[B47], GP-B[B48], CHIPS[B54], Swift[B57], WMAP[B58], HEASARC[B65], HETE-2[B67], Suzaku[B68]

Description: Cosmic Questions is a 5, 000-square-foot traveling exhibition for science centers and museums that invites audiences to explore fundamental questions and recent discoveries about the origin, evolution, and structure of the universe. Among other activities, this highly interactive exhibition offers visitors a chance to go beyond the visible and observe what the universe would look like if they could see infrared light or x rays, journey to a black hole and study it from a virtual orbiting observatory, discover what it's like to be an astronomer, make the acquaintance of observers on a Hawaiian mountaintop or a team launching a great observatory into space, and program a remote telescope to take a picture of a selected object. Cosmic Questions was made possible by generous support from the National Science Foundation and from the NASA Science Mission Directorate Universe Education Forum at the Harvard-Smithsonian Center for Astrophysics (CfA). To date, over one million visitors have seen the exhibition, which is touring North America under the management of the Association for Science-Technology Centers. Dozens of scientists from the CfA and from other institutions around the world contributed to Cosmic Questions and its accompanying programs.

Lead: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: mdussault@cfa.harvard.edu. Phone: 617-496-7962.Primary URL: <http://www.universeforum.org/exhibit>

Partner(s): Jeff Kennedy Associates, Inc.

Somerville, MA
Cambridge, MA
Boston, MA
Arlington, VA
Elk Grove Village, IL

Leslie University
Museum of Science
National Science Foundation
Superior Exhibits and Design, Inc.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	05 Jan 05	Flandrau Science Center—Tucson, AZ	0	32000	0
01 Feb 05	05 Sep 05	Museum of the Rockies—Bozeman, MT	0	78195	0

A338. "Countdown to Supernova" Planetarium Show

Theme(s): Astrophysics

Msn/Prgm: NESSIE B/F[B40]

Description: "Countdown to Supernova" was developed and shown at the Charles Hayden Planetarium in the Museum of Science, Boston. Kelly Beatty from "Sky & Telescope" magazine helped to write the show and consulted on its production. This planetarium show highlights the life cycles of stars with special emphasis on the supernova phenomenon, which has been observed by astronomers since antiquity.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.

Phone: 617-589-4228.

Primary URL: <http://www.mos.org>

Scientist(s): Mr. Kelly Beatty

"Sky & Telescope" magazine

Cambridge, MA

Ms. Robin Symonds

Museum of Science

Boston, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Feb 05	30 Sep 05	Museum of Science—Boston, MA	0	60035	0

A339. Current Science and Technology Center

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: The Current Science & Technology (CS&T) Center at the Museum of Science, Boston, provides regular presentations and Web updates on space science topics in the news. They also provide coaching and a venue for space scientists interested in giving public presentations on their research. These various presentations are sometimes used by print, radio, and television news organizations—including the New England Cable News (NECN) network, which routinely features news from the CS&T stage. This year, CS&T staff and supporting scientists presented programs on the Einstein Centennial, the Mars/Mars Exploration Rover (MER) mission, the Cassini-Huygens mission to Saturn, the Deep Impact mission to a comet, the Return to Flight, and a planet-themed public concert.

Lead: Mr. Jay Dobek, Museum of Science, Boston, MA 02114-1099. E-mail: jdobek@mos.org. Phone: 617-589-0405.Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org. Phone: 617-589-4228.Primary URL: <http://www.mos.org/cst>

Secondary

URL: <http://www.mos.org/nessie>

Scientist(s): Dr. Tereasa Brainerd

Boston University

Boston, MA

Dr. Christine Jones

Harvard-Smithsonian Center for Astrophysics

Cambridge, MA

Dr. Ken Olum

Tufts University

Medford, MA

Dr. Simon Steel

Harvard-Smithsonian Center for Astrophysics

Cambridge, MA

Mr. Adam Weiss

Museum of Science

Boston, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Museum of Science—Boston, MA	0	2200	0
05 Oct 04	06 Sep 05	New England Cable News—Newton, MA	0	90050	200000
26 Mar 05	26 Mar 05	Museum of Science—Boston, MA	0	300	0
08 Jul 05	08 Jul 05	Boston Landmarks Orchestra—Boston, MA	0	250	0
26 Jul 05	26 Jul 05	Museum of Science—Boston, MA	0	100	0
04 Aug 05	08 Aug 05	WFXT-TV, Channel 25/Boston—Boston, MA	0	50000	0
09 Aug 05	09 Aug 05	CN8, The Comcast Network/Moorestown—Moorestown, NJ	0	30000	0

A340. Discovering the Unseen with Ultraviolet Light

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: This is a project to develop an exhibit at the Adler planetarium about the electromagnetic spectrum and, specifically, ultraviolet (UV) light. The exhibit will use UV video cameras and materials that have various UV properties. Visitors will be able to explore the properties of various objects as seen in ultraviolet light. Furthermore, this exhibit will link into Adler's planned and existing programs for teacher education.

Lead: Dr. Melville Ulmer, Northwestern University, Evanston, IL 60208-2900. E-mail: m-ulmer2@northwestern.edu. Phone: 847-491-5633.Contact: Dr. Michael Smutko, Adler Planetarium and Astronomy Museum, Chicago, IL 60605. E-mail: msmutko@adlerplanetarium.org. Phone: 312-322-0318.**A341. Earth Science Planetarium Shows**

Theme(s): Earth Science

Msn/Prgm: Immersive Earth[B18], IMAGE[B75], Cluster II[B81], MMS[B86]

Description: Creation of educational Earth science planetarium shows, to be shown both in large theaters and in portable immersive theaters.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.Contact: Dr. Kerry Handron, Carnegie Museum of Natural History, Pittsburgh, PA 15213. E-mail: HandronK@CarnegieMNH.Org. Phone: 412-578-2580.Primary URL: <http://earth.rice.edu>

Secondary

URL: <http://www.e-planetarium.com>

Scientist(s): Dr. Kerry Handron

Carnegie Museum of Natural History

Pittsburgh, PA

Dr. Patricia Reiff

Rice University

Houston, TX

Dr. Dale Sawyer

Rice University

Houston TX

Dr. Carolyn Sumners

Houston Museum of Natural Science

Houston, TX

Partner(s): Houston Museum of Natural Science

Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
06 Mar 05	30 Sep 05	Houston Museum of Natural Science—Houston, TX	0	90750	0
04 Jun 05	30 Sep 05	Carnegie Museum of Natural History—Pittsburgh, PA	0	4200	0

A342. "Eyes on Earth": Traveling Exhibit Tour

Theme(s): Earth Science

Msn/Prgm: EOS[B15]

Description: "Eyes on Earth" is a highly interactive science exhibition that focuses on the Earth Observing System (EOS) and examines how satellite observations are made and what we can learn about Earth using space technology. Designed primarily for families and school groups (elementary through adults), visitors learn what a satellite is, discover the different types of orbits, and explore cutting-edge technology similar to that used by EOS scientists. "Eyes on Earth" brings these concepts "down to Earth" through a combination of fun, accessible interactive activities in a playful and "spacey" environment. The exhibition is currently in year 4 of its scheduled 8-year tour.

Lead: Dr. Ray Vandiver, Oregon Museum of Science and Industry, Portland, OR 97214-3354.

E-mail: rvandiver@oms.edu. Phone: 503-797-4540.Primary URL: <http://www.oms.edu/store/traveling/unit.cfm?ID=1>

Secondary

URL: <http://www.oms.edu/visit/earth/eyesonearth/>

Scientist(s): Dr. Raymond Vandiver Oregon Museum of Science and Industry Portland, OR

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	02 Jan 05	Lafayette Natural History Museum and Planetarium—Lafayette, LA	0	15000	0
01 Feb 05	30 Apr 05	Coyote Point Museum for Environmental Education—San Mateo, CA	0	27000	0
28 May 05	05 Sep 05	Ecology, Culture, History and Opportunities (ECHO) at the Leahy Center for Lake Champlain—Burlington—VT	0	30000	0

A343. "Fun in the Sun" Summer Camp

Theme(s): Heliophysics

Msn/Prgm: Solar-B[B87]

Description: Fun in the Sun is a weeklong day camp developed for children of ages 9–11. The camp is designed to give the campers an entertaining and engaging exposure to the nature of our Sun, our modern understanding and observation of it, and its very central importance in our lives on Earth. The Sun and Sun-Earth Connection themes are explored through a variety of projects, incorporating scientific ideas, art, and crafts to appeal to the campers' age group, provide ample hands-on/minds-on activities, and produce daily take-home materials and products. Campers begin the week with an orientation to our Sun as a star and the scale of the Sun, planets, and solar system. The Sun in human history is showcased through some cultural solar iconography and mythology from around the world, and the idea of the Sun in art and myth is made personal when the campers are guided to create their own artwork. Technological connections between humans and the Sun are investigated through the examination of modern solar images obtained by satellite observatories like SOHO, Yohkoh, TRACE, Solar-B, and other solar missions. To put solar-measuring technology in the hands of the campers, three different sundial activities are run: a small pendant version, a paper-and-string version, and a large-scale analemmic human dial. The Sun-Earth Connection theme is explored as well, the central focus of which is the Sun-Earth Energy Connections hike, in which campers seek out and relate objects and processes in the immediate environment that are connected to each other in chains and webs of solar energy flow through the Earth system. At the conclusion of the week, campers build miniature solar pizzas and cook them in solar ovens, forming a tasty model of the Sun and its different layers and cooking it using energy from the Sun.

Lead: Mr. Benjamin Burress, Chabot Space and Science Center, Oakland, CA 94619.

E-mail: bburress@chabotspace.org. Phone: 510-336-7308.Primary URL: <http://www.chabotspace.org/vsc/solar/news/july2005summercamp.asp>

Secondary

URL: <http://www.chabotspace.org/vsc/solar/news/august2005summercamp.asp>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
11 Jul 05	15 Jul 05	Chabot Space and Science Center—Oakland, CA	6	0	0
22 Aug 05	26 Aug 05	Chabot Space and Science Center—Oakland, CA	12	0	0

A344. "Gravity Rules!" Planetarium Show

Theme(s): Astrophysics

Msn/Prgm: NESSIE B/F[B40]

Description: Visitors to the Charles Hayden Planetarium at the Museum of Science journey through majestic galaxies, swirling in space to discover why their feet stay on the ground in "Gravity Rules!"—a new multimedia show that unlocks the mystery of gravity. "Gravity Rules!" features a live actor from the Museum's Science Theater who plays Jack, a medieval court jester, who guides audiences as they experience the true power of gravity. The 40-minute Planetarium show addresses our understanding of gravity as conceived by Isaac Newton over 300 years ago and inspires audiences with early-20th-century insights by Albert Einstein.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.
Phone: 617-589-4228.
Primary URL: <http://www.mos.org/nessie>

A345. How Good Is "Good Enough?": Engineering and Other Tradeoffs and Remote Sensing Data

Theme(s): Planetary
Msn/Prgm: SRT[B28]
Description: Our goal is to create a learning activity that will allow Smithsonian National Air and Space Museum visitors, or students accessing the activity online, to use a software tool that will allow them to explore the cost/benefits associated with spatial resolution. The original idea was to use a set of "pin box" toys and terrain models from Goddard Space Flight Center (GSFC) to provide (for the Museum user) a hands-on example, since the different boxes would use different-sized pinheads. The smaller and more closely spaced the pinheads, the easier the interpretation process, against the tradeoff of higher cost (there would be a cost associated with each pinhead used). We have the pinboxes and a set of images of Meteor Crater that have been progressively pixellated to provide a counterpoint to the pinbox. The intent was to create an applet that did the same thing as the pinbox. An intern digitized topographic data and built an applet, but we have not been satisfied with the results to date. Principal Investigator Zimbelman and Education and Public Outreach Lead: Williams met on 10/4/05 with a group from GSFC who have been using Mars Orbiter Laser Altimeter (MOLA) data and a visualization tool called "GRIDVIEW." We have the educational context and audience, and they have a more sophisticated program than we have been able to acquire. The idea would be to modify GRIDVIEW to become a cyber version of the pinbox, with user-selected pinhead size (with associated costs). When the cyber pins drop onto a terrain model selected, but not seen, by the user, the heads would change color in proportion to the distance dropped, duplicating the appearance of a density-sliced physiographic map familiar to most students. The GRIDVIEW software would allow the user to rotate the pinbox in cyberspace, facilitating understanding of the relationship between terrain and map. Other "bells and whistles" are possible.
Lead: Dr. James Zimbelman, Smithsonian National Air and Space Museum (NASM), Washington, DC 20560.
E-mail: jrz@nasm.si.edu. Phone: 202-786-2981.
Contact: Dr. Steven Williams, Smithsonian National Air and Space Museum (NASM), Washington, DC 20560.
E-mail: williamss@nasm.si.edu. Phone: 202-633-2553.

A346. Hubble Space Telescope: 15th Anniversary Celebration

Theme(s): Astrophysics
Msn/Prgm: HST[B49]
Description: The national unveiling of two spectacular Hubble images of M51 and the Eagle Spire in M16 at 100 museums, science centers, planetariums, nature centers, and Challenger Centers around the country highlighted the 15th anniversary of the deployment of the Hubble Space Telescope. Mural-size prints were unveiled on Hubble's birthday by local dignitaries and guests, providing an event around which these venues could build public awareness and develop press interest. We shipped a wide range of resources for the hosting institutions, including videos, interactive CDs, press-release kits, video news releases, background science briefings, and educational items they could give to teachers, such as lithographs and the Amazing Space curriculum support activities CD. We also provided promotion of their participation on our HubbleSite Web site. Many of the venues used the kits to entice local television stations, radio stations, and newspapers to cover the unveilings and invite the public to attend. Along with the kits, we shipped copies of the special Hubble birthday edition DVD, captioned for the hearing impaired, which showcases video minidocumentaries, the new music video Revelations, educational video clips, and the third edition of the our yearbook videos. The local unveiling events generated broad nationwide interest that translated into a heightened public awareness of Hubble's birthday and heavy press coverage. Press accounts of the festivities stayed on Google's Science News page for 3 days, and more than 660 press accounts of the event appeared. Television studios recorded an astounding Neilson audience of nearly 50 million in the April 24-26 interval. On April 28, the U.S. Congress introduced to the floor House Resolution 251, congratulating, on the 15th anniversary of the launch of the Hubble Space Telescope, all of the individuals and organizations that have helped make Hubble one of the most important astronomical instruments in history.
Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.
Contact: Ms. Albert Lucy, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.
Primary URL: http://hubblesource.stsci.edu/anniversary/Anniv_Participants.htm
Secondary URL: <http://hubblesource.stsci.edu/exhibits/videos/ordering/index.php>
Scientist(s): Ms. Lucy Albert Space Telescope Science Institute Baltimore, MD
Mr. John Godfrey Space Telescope Science Institute Baltimore, MD
Mr. Bryan Preston Space Telescope Science Institute Baltimore, MD
Mr. John Stoke Space Telescope Science Institute Baltimore, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
25 Apr 05	25 Apr 05	Space Telescope Science Institute— Baltimore, MD	0	300	0

25 Apr 05	25 Apr 05	Space Telescope Science Institute— Baltimore, MD	0	5000	0
25 Apr 05	30 Sep 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	150	0

A347. Hubble Space Telescope: “Heavens Above” Traveling Exhibit

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: Organized by the Space Telescope Science Institute (STScI) and the Midland Center for the Arts of Midland, MI, this new, low-cost traveling exhibition features breathtaking images of the universe presented as large-format-captioned transparencies mounted in light boxes. The images survey a range of visible-light astronomy from the solar system to stellar evolution to the farthest reaches of space and time. Also included in the exhibition is a plasma display panel featuring ViewSpace, continuously running presentations of Hubble images and animations with interpretive text set to evocative music.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Contact: Ms. Lucy Albert, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.

Primary URL: <http://hubblesource.stsci.edu/exhibits/traveling/>

Partner(s): Midland Center for the Arts Midland, MI

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	20 Jan 05	Science Place and T.I. Founders IMAX Theater— Dallas, TX	0	0	0
01 Mar 05	21 Jun 05	COSI—Columbus, OH	0	0	0
23 Jul 05	23 Sep 05	University of Mississippi—Oxford, MS	0	0	0

A348. Hubble Space Telescope: “Hubble: Galaxies Across Space and Time,” an IMAX Short Film

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: In March of 2002, during the final completed flight of the Space Shuttle Columbia, astronauts installed the Advanced Camera for Surveys aboard Hubble. This new instrument is now providing images of such resolution and clarity that large-format film screens are an ideal medium for displaying them. With the generous support of David Keighley Productions 70MM, Inc., an IMAX company, we created Hubble: Galaxies Across Space and Time, a journey across 9 billion years of cosmic history that takes a mere 2 minutes 51 seconds. At the moment, five prints and soundtracks are available. The highlight of the film is a fantastic computer-generated flight through a field of over 10,000 galaxies that takes audiences on a journey back through time to an era when galaxies were newly formed. Viewers will see the universe as it appeared when it was young. These galaxies were photographed by Hubble as part of the Great Observatory Origins Deep Survey project. The original source image contains over 600 million pixels. Hubble scientists and imaging specialists, led by Dr. Frank Summers, worked for months to extract individual galaxy images, placing them in a 3-D model according to their approximate true distances, as determined by ground-based photometric redshift data. Barbara Feldon narrates the film, accompanied by an evocative musical score by Jonn Serrie.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Contact: Ms. Lucy Albert, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.

Primary URL: <http://hubblesource.stsci.edu/exhibits/largefilm/>

Scientist(s): Dr. Frank Summers Space Telescope Science Institute Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	17 Oct 04	Science Place and T.I. Founders IMAX Theater— Dallas, TX	0	150000	0
01 Oct 04	31 Dec 04	Sci-Port Discovery Center—Shreveport, LA	0	5000	0
01 Nov 04	17 Nov 04	Museum of Science and Technology— Syracuse, NY	0	15000	0
01 Nov 04	28 Feb 05	Clark Planetarium—Salt Lake City, UT	0	15000	0
01 Nov 04	31 Mar 05	California Science Center—Los Angeles, CA	0	10000	0
01 Jan 05	27 Apr 05	National Museum of Naval Aviation— Pensacola, FL	0	16310	0
01 Feb 05	30 Jun 05	Science Station—Cedar Rapids, IA	0	160000	0
01 Apr 05	28 May 05	Denver Museum of Nature and Science— Denver, CO	0	50000	0
01 May 05	31 Jul 05	St. Louis Science Center—St. Louis, MO	0	75000	0
01 Jun 05	31 Aug 05	Whitaker Center for Science and the Arts— Harrisburg, PA	0	75000	0
01 Jul 05	30 Sep 05	Fort Worth Museum of Science and History— Fort Worth, TX	0	101000	0

01 Sep 05	30 Sep 05	Bob Bullock Texas State History Museum— Austin, TX	0	15000	0
01 Sep 05	30 Sep 05	Gulf Coast Exploreum Science Center— Mobile, AL	0	28000	0

A349. Hubble Space Telescope: HubbleSource Video Collection

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: Designed especially for public exposition in informal settings, these video minidocumentaries are perfect for small kiosks, minitheaters, and planetarium preshow. Each is beautifully scored and professionally narrated. The collection is made up of a compilation of videos on DVD that plays on normal DVD players. Each video sequence is independently accessible on the DVD, and the disc has been tested for chapter-access compatibility with popular planetarium media automation systems. Videos on the 2005 DVD collection include Hubble 2005, Hubble 2004, Hubble: The First Decade, Hubble Reborn, a special Hubble anniversary “music video,” and a number of short animation clips.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Contact: Ms. Lucy Albert, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.

Primary URL: <http://hubblesource.stsci.edu/exhibits/videos/theater/year2003.php>

A350. Hubble Space Telescope: Immersive Dome Visualizations for Planetariums

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: An emerging trend in the planetarium profession is the development of ultra-high-definition video systems to cover a projection dome with “immersive” environmental simulations. In response to this trend, STScI has begun to develop a series of high-resolution, fisheye-format visualizations based on scientific research data. The first such visualization, derived from a supercomputer simulation of colliding galaxies, premiered at the Smithsonian’s National Air and Space Museum planetarium as part of the new program “Infinity Express.” Subsequently, this visualization and two others (a time-lapse view of a globular star cluster and an updated journey through a computer simulation of the large-scale structure of the universe) were made available to all the major suppliers of immersive planetarium systems, including Spitz, Sky-Skan, Evans and Sutherland, and Silicon Graphic Incorporated (SGI). They are also available to end-users upon request.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Contact: Ms. Lucy Albert, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.

Primary URL: <http://hubblesource.stsci.edu/sources/video/clips/>

A351. Hubble Space Telescope: International Planetarium Society Slide Service

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: In partnership with the International Planetarium Society (IPS), the Space Telescope Science Institute (STScI) distributes first-generation 35-millimeter slides of Hubble press-release images to planetariums nationwide. Each of the approximately 100 planetariums participating in the service receives high-fidelity slides, paying IPS only for the cost of shipment. STScI furnishes these slides in bulk. During the past year, over 1,500 slides were distributed in this manner, offering planetarium audiences the opportunity to witness Hubble imagery in its full splendor.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Contact: Ms. Lucy Albert, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: lalbert@stsci.edu.
Phone: 410-338-4857.

Primary URL: <http://hubblesource.stsci.edu/sources/illustrations/service/>

A352. “Hubble Space Telescope: ‘New Views of the Universe II’” Traveling Exhibit

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: Featuring the best of the Hubble’s beautiful images, Hubble Space Telescope: ‘New Views of the Universe II’ shows visitors how this suite of scientific instruments is challenging widely held assumptions about the cosmos. The exhibition explores the Hubble, its history and purpose, and its anatomy and operation, immersing visitors in the magnificence and mystery of the Hubble mission. Visitors enter the exhibition through a tunnel of monitors that project images taken by Hubble. Four freestanding structures are devoted to Hubble’s contributions to the exploration of planets, stars, galaxies, and the universe. A scale model of Hubble is complemented by satellite units that incorporate hands-on activities about how the telescope works. Hubble Space Telescope has been organized by the Smithsonian Institution Traveling Exhibition Service (SITES) and the Space Telescope Science Institute.

Lead: Mr. John Stoke, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: stoke@stsci.edu.
Phone: 410-338-4394.

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Adler Planetarium and Astronomy Museum— Chicago, IL	0	75000	0
01 Oct 04	30 Sep 05	Adventure Science Center—Nashville, TN	0	75000	0
01 Oct 04	30 Sep 05	Arizona Science Center—Phoenix, AZ	0	30000	0
01 Oct 04	30 Sep 05	Bishop Museum—Honolulu, HI	0	330000	0
01 Oct 04	30 Sep 05	Black Canyon of the Gunnison National Park— Gunnison, CO	0	175000	0
01 Oct 04	30 Sep 05	Brevard Community College—Cocoa, FL	0	25000	0
01 Oct 04	30 Sep 05	Buffalo Museum of Science—Buffalo, NY	0	144000	0
01 Oct 04	30 Sep 05	Chabot Space and Science Center— Oakland, CA	0	120000	0
01 Oct 04	30 Sep 05	Challenger Space Center—Peoria, AZ	0	40000	0
01 Oct 04	30 Sep 05	Clark Planetarium—Salt Lake City, UT	0	150000	0
01 Oct 04	30 Sep 05	Cleveland Museum of Natural History— Cleveland, OH	0	350000	0
01 Oct 04	30 Sep 05	COSI—Columbus, OH	0	234000	0
01 Oct 04	30 Sep 05	Craters of the Moon National Monument— Arco, ID	0	250000	0
01 Oct 04	30 Sep 05	Curecanti National Recreation Area— Gunnison, CO	0	900000	0
01 Oct 04	30 Sep 05	Da Vinci Discovery Center of Science and Technology—Allentown, PA	0	120000	0
01 Oct 04	30 Sep 05	Dennos Museum Center—Traverse City, MI	0	60000	0
01 Oct 04	30 Sep 05	Denver Museum of Nature and Science— Denver, CO	0	1300000	0

01 Oct 04	30 Sep 05	Effigy Mounds National Monument— Harpers Ferry, IA	0	60000	0
01 Oct 04	30 Sep 05	Fernbank Science Center—Atlanta, GA	0	865000	0
01 Oct 04	30 Sep 05	Fleischmann Planetarium—Reno, NV	0	30000	0
01 Oct 04	30 Sep 05	Franklin Institute Science Museum— Philadelphia, PA	0	1000000	0
01 Oct 04	30 Sep 05	Gene Roddenberry Planetarium—El Paso, TX	0	34000	0
01 Oct 04	30 Sep 05	Georgia Southern University—Statesboro, GA	0	8000	0
01 Oct 04	30 Sep 05	Hayden Planetarium—New York, NY	0	1200000	0
01 Oct 04	30 Sep 05	International Museum of Art and Science— McAllen, TX	0	80000	0
01 Oct 04	30 Sep 05	Kingman Museum—Battle Creek, MI	0	6300	0
01 Oct 04	30 Sep 05	Longway Planetarium—Flint, MI	0	82000	0
01 Oct 04	30 Sep 05	Louisiana Art and Science Museum— Baton Rouge, LA	0	130000	0
01 Oct 04	30 Sep 05	Maryland Science Center—Baltimore, MD	0	150000	0
01 Oct 04	30 Sep 05	Maynard F. Jordan Planetarium—Orono, ME	0	10000	0
01 Oct 04	30 Sep 05	Memphis Pink Palace Museum—Memphis, TN	0	70000	0
01 Oct 04	30 Sep 05	Merrillville Community Planetarium— Merrillville, IN	0	31000	0
01 Oct 04	30 Sep 05	Midland Center for the Arts—Midland, MI	0	63000	0
01 Oct 04	30 Sep 05	Milton Rubenstein Museum of Science and Technology—Syracuse, NY	0	325000	0
01 Oct 04	30 Sep 05	NASA Kennedy Space Center Visitor Center— Kennedy Space Center—FL	0	1500000	0
01 Oct 04	30 Sep 05	New York Hall of Science—New York, NY	0	247000	0
01 Oct 04	30 Sep 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	750000	0
01 Oct 04	30 Sep 05	North Museum of Natural History and Science— Lancaster, PA	0	30000	0
01 Oct 04	30 Sep 05	Orlando Science Center—Orlando, FL	0	275000	0
01 Oct 04	30 Sep 05	Pacific Science Center—Seattle, WA	0	800000	0
01 Oct 04	30 Sep 05	Reuben H. Fleet Science Center— San Diego, CA	0	540000	0
01 Oct 04	30 Sep 05	Robeson Planetarium and Science Center— Lumberton, NC	0	22000	0
01 Oct 04	30 Sep 05	Science Center of Connecticut— West Hartford, CT	0	30000	0
01 Oct 04	30 Sep 05	Science Center of Iowa—Des Moines, IA	0	300000	0
01 Oct 04	30 Sep 05	Science Place and T.I. Founders IMAX Theater— Dallas, TX	0	5000000	0
01 Oct 04	30 Sep 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	9000000	0
01 Oct 04	30 Sep 05	U.S. Space and Rocket Center—Huntsville, AL	0	400000	0
01 Oct 04	30 Sep 05	University of Wisconsin-Fox Valley— Menasha, WI	0	40000	0
01 Oct 04	30 Sep 05	Virginia Living Museum—Newport News, VA	0	355000	0

A355. IMAGE: Planetarium Programs and Museum Kiosks

Theme(s): Heliophysics

Msn/Prgm: IMAGE[B75]

Description: These are 50 classroom activities designed for K–6 students. Topics include magnetism, solar activity, stars, and satellite design. The set includes innovative hands-on activities related to satellite design, magnetism, and solar storms.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.Scientist(s): Dr. Patricia Reiff Rice University Houston, TX
Dr. Carolyn Sumners Houston Museum of Natural Science Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
10 Oct 04	30 Sep 05	Houston Museum of Natural Science— Houston, TX	0	385000	1000000
05 Aug 05	05 Aug 05	Houston Museum of Natural Science— Houston, TX	35	0	0
08 Aug 05	08 Aug 05	American Association of Physics Teachers Conference—Salt Lake City, UT	0	70	0

A356. "Inside Einstein's Universe": Education Outreach Program

Theme(s): Astrophysics

Msn/Prgm: SEU[B35], CXO[B44], GLAST[B47], GP-B[B48], Swift[B57], XMM[B69]
 Description: "Inside Einstein's Universe" (IEU) is an education outreach program for museums, planetariums, and other informal education venues across the country. Associated with the World Year of Physics, IEU is a celebration of the Einstein Centennial and the astronomical implications of his 1905 "miracle year." Over 100 participating organizations received educational and content support surrounding the topics of cosmology and black holes, as well as more general astronomy and space science explorations. Resources, available online and through special distribution to select partners, include informal presentations, interactive Web features, presentations for scientists and engineers, featured visualizations, and access to NASA's growing collection of mission E/PO resources.

Contact: Ms. Erika Reinfeld, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: ereinfeld@cfa.harvard.edu. Phone: 617-495-5433.

Primary URL: <http://www.universeforum.org/einstein>

Scientist(s):	Ms. Wendy Ackerman	Maryland Science Center	Baltimore, MD
	Ms. Lindsay Bartolone	Adler Planetarium and Astronomy Museum	Chicago, IL
	Ms. Annette Brickley	Challenger Learning Center of Maine	Bangor, ME
	Dr. Paul Coleman	University of Hawaii at Hilo	Hilo, HI
	Dr. Megan Donahue	Space Telescope Science Institute	Baltimore, MD
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Jennifer Grier	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. David Hostetter	Lafayette Natural History Museum and Planetarium	Lafayette, LA
	Dr. Christine Jones	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Robin Kennedy	Challenger Learning Center of Maine	Bangor, ME
	Dr. Michelle Larson	Pennsylvania State University	University Park, PA
	Dr. Geoff Lenters	Grand Valley State University	Allendale, MI
	Dr. James Lochner	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. David McDonald	Christa McAuliffe Planetarium	Concord, NH
	Ms. Karen Meyers	Grand Valley State University	Allendale, MI
	Dr. Carmen Pantoja	Polytechnic University of Puerto Rico	San Juan, Puerto Rico
	Mr. Lou Papai	Science Central	Fort Wayne, IN
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Mr. Chris Reed	Avampato Discovery Museum	Charleston, WV
	Ms. Erika Reinfeld	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. Frank Sienkiewicz	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Patrick Slane	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. Curt Spivey	Avampato Discovery Museum	Charleston, WV
	Dr. Simon Steel	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Partner(s):	Adler Planetarium and Astronomy Museum		Chicago, IL
	Avampato Discovery Museum		Charleston, WV
	Bishop Museum		Honolulu, HI
	Chabot Space and Science Center		Oakland, CA
	Challenger Learning Center of Maine		Bangor, ME
	Christa McAuliffe Planetarium		Concord, NH
	Fernbank Science Center		Atlanta, GA
	Grand Valley State University		Allendale, MI
	Lafayette Natural History Museum and Planetarium		Lafayette, LA
	Maryland Science Center		Baltimore, MD
	Museum of the Rockies		Bozeman, MT
	Orlando Science Center		Orlando, FL
	Science Central		Fort Wayne, IN

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
10 Jan 05	21 Apr 05	Grand Valley State University—Allendale, MI	23	0	0
20 Jan 05	20 Jan 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	20	0	0
01 Feb 05	15 Apr 05	Chabot Space and Science Center—Oakland, CA	50	0	0
01 Feb 05	30 Sep 05	Orlando Science Center—Orlando, FL	0	12000	0
03 Feb 05	03 Feb 05	Christa McAuliffe Planetarium—Concord, NH	1	0	0
09 Feb 05	09 Feb 05	Christa McAuliffe Planetarium—Concord, NH	12	0	0
17 Feb 05	17 Feb 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	21	0	0
18 Feb 05	18 Feb 05	University of Kentucky—Lexington, KY	35	0	0
03 Mar 05	03 Mar 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	16	0	0
10 Mar 05	16 Mar 05	Avampato Discovery Museum—Charleston, WV	55	0	0
10 Mar 05	19 Mar 05	Museum of the Rockies—Bozeman, MT	0	120	0
12 Mar 05	12 Mar 05	Maryland Science Center—Baltimore, MD	0	40	0
12 Mar 05	13 Mar 05	Detroit Science Center—Detroit, MI	0	1800	0

15 Mar 05	15 Mar 05	Challenger Learning Center of Maine—Bangor, ME	2	22	0
15 Mar 05	30 Aug 05	Chabot Space and Science Center—Oakland, CA	50	0	0
19 Mar 05	19 Mar 05	Science Central—Fort Wayne, IN	0	437	0
20 Mar 05	20 Mar 05	Science Central—Fort Wayne, IN	0	165	0
01 Apr 05	30 Aug 05	Museum of the Rockies—Bozeman, MT	0	125	0
01 Apr 05	30 Sep 05	Fernbank Science Center—Atlanta, GA	0	1500	0
07 Apr 05	07 Apr 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	13	0	0
16 Apr 05	16 Apr 05	Adler Planetarium and Astronomy Museum—Chicago, IL	0	521	0
16 Apr 05	16 Apr 05	Detroit Science Center—Detroit, MI	0	1000	0
16 Apr 05	16 Apr 05	Grand Valley State University—Allendale, MI	0	250	0
21 Apr 05	21 Apr 05	Challenger Learning Center of Maine—Bangor, ME	5	0	0
30 Apr 05	30 Apr 05	Lafayette Natural History Museum and Planetarium—Lafayette, LA	0	190	0
01 May 05	31 May 05	Avampato Discovery Museum—Charleston, WV	450	450	0
04 May 05	04 May 05	Grand Valley State University—Allendale, MI	235	0	0
07 May 05	07 May 05	Christa McAuliffe Planetarium—Concord, NH	0	514	0
12 May 05	12 May 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	19	0	0
20 May 05	20 May 05	Christa McAuliffe Planetarium—Concord, NH	14	0	0
20 May 05	20 May 05	Christa McAuliffe Planetarium—Concord, NH	16	0	0
27 May 05	27 May 05	2005 Middle Atlantic Planetarium Society Conference—Philadelphia, PA	40	0	0
03 Jun 05	03 Jun 05	Adler Planetarium and Astronomy Museum—Chicago, IL	0	118	0
13 Jun 05	19 Aug 05	Bishop Museum—Honolulu, HI	100	0	0
15 Jun 05	15 Jun 05	Science Central—Fort Wayne, IN	50	0	0
18 Jun 05	18 Jun 05	Bishop Museum—Honolulu, HI	20	0	0
19 Jun 05	31 Aug 05	Maryland Science Center—Baltimore, MD	0	11117	0
03 Jul 05	03 Jul 05	Bishop Museum—Honolulu, HI	0	3000	0
07 Jul 05	07 Jul 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	15	0	0
08 Jul 05	08 Jul 05	Chabot Space and Science Center—Oakland, CA	20	0	0
13 Jul 05	13 Jul 05	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	9	0	0
28 Jul 05	28 Jul 05	Gloucester High School—Gloucester, MA	9	0	0
01 Aug 05	30 Sep 05	Science Central—Fort Wayne, IN	750	250	0
08 Sep 05	30 Sep 05	Fernbank Science Center—Atlanta, GA	0	10000	0
24 Sep 05	24 Sep 05	Science Central—Fort Wayne, IN	150	0	0

A357. Kepler: Exhibits for Museums and Classroom Demos

Theme(s): Astrophysics

Msn/Prgm: Kepler[B50]

Description: The Kepler mission contributed a module about finding planets using the transit method for the “Alien Earths” exhibit, produced by the Space Science Institute.

Lead: Dr. Edna DeVore, Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, CA 94043.

Primary URL: <http://kepler.nasa.gov>

Secondary

URL: <http://www.alienearts.org/>

Scientist(s): Dr. William Borucki

NASA Ames Research Center

Moffett Field, CA

Dr. David Koch

NASA Ames Research Center

Moffett Field, CA

Partner(s): Lawrence Hall of Science

Berkeley, CA

Space Science Institute

Boulder, CO

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Feb 05	08 Apr 05	Lawrence Hall of Science—Berkeley, CA	0	42000	0

A358. Mars: Models and Exhibits

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars models and exhibits are loaned or set up in coordination with museum and other informal-education partners so that the general public can experience the excitement of ongoing discoveries and see mission hardware.

Contact: Ms. Connie Gennaro, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Consuelo.Gennaro@jpl.nasa.gov. Phone: 818-393-2502.

Scientist(s): Ms. Connie Gennaro NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
07 Feb 05	30 Jun 05	Museum of Idaho—Idaho Falls, ID	0	20000	0
15 May 05	30 Jun 05	San Diego Aerospace Museum—San Diego, CA	0	25426	0
15 May 05	10 Aug 05	Discovery Center—Red Bluff, CA	0	23140	0

A359. "MarsQuest" Planetarium Show

Theme(s): Astrophysics, Planetary

Msn/Prgm: SSE[B34], SSI B/F[B42], JPL SSE[B96], Mars Public Engagement[B97]

Description: The "MarsQuest" planetarium show is a National Science Foundation (NSF)-funded product produced by Loch Ness Productions in collaboration with the Space Science Institute (SSI) of Boulder, CO, and more than a dozen scientists and education experts. The "MarsQuest" planetarium show is a supplemental component of the "MarsQuest" traveling exhibition now touring the United States, and planetariums at exhibit host sites receive the show free. The show is divided into three sections that present the viewer with the cultural, historical, and scientific aspects of Mars study and exploration. In the first section, "Homage," the show traces Mars through history. The second section, "Mars in Focus," details the Mars of our time—as seen in the night sky, through binoculars and telescopes, and from our Mars explorations. Mission findings from Viking, Pathfinder, and Mars Global Surveyor feature reports on Mars weather, climate, and areology. The narrative compares the climate and terrain of Earth and Mars, and it presents the current thinking about the areologic history of the planet and a rationale for future exploration. "Mars in the Future" examines where on Earth people can prepare to live on Mars, what will be needed to get crewed missions there, and what the first landing may be like. The show ends with "Rhapsody on a Red Planet," a poetically styled "ode to Mars," this time from the perspective of a future Mars explorer tracing the efforts that led to the first human footsteps on the Red Planet.

Lead: Ms. Carolyn Collins Petersen, Loch Ness Productions, Groton, MA 01450-3159. E-mail: carolyn@lochness.com. Phone: 978-448-3666.

Primary URL: <http://www.lochness.com>

Secondary

URL: <http://www.spacescience.org>

Partner(s): California Institute of Technology (Caltech)
European Space Agency (ESA)
Lunar and Planetary Institute
Malin Space Science Systems
NASA Ames Research Center
NASA Johnson Space Center
Search for Extraterrestrial Intelligence (SETI) Institute
Space Science Institute
Space Telescope Science Institute
U.S. Geological Survey

Pasadena, CA
Paris, France
Houston, TX
La Jolla, CA
Moffett Field, CA
Houston, TX
Mountain View, CA
Boulder, CO
Baltimore, MD
Flagstaff, AZ

A360. "MarsQuest" Traveling Exhibit

Theme(s): Planetary

Msn/Prgm: SSI B/F[B42], Mars Public Engagement[B97], MER[B99], MGS[B100], Mars Express[B115]

Description: The "MarsQuest" project is a 4, 500-square-foot, \$3M, traveling exhibition that will enable millions of Americans to share in the excitement of the scientific exploration of Mars and to learn more about their own planet in the process. The refurbished exhibit is now on its second 3-year tour. "MarsQuest" is organized around three intriguing locations on Mars: (1) Olympus Mons, the largest volcano in the solar system; (2) Valles Marineris, a canyon as long as the United States is wide; and (3) Ares Vallis, the Pathfinder landing site. Each area makes comparisons between Mars and Earth, giving visitors a real sense of the Martian environment. "MarsQuest" visitors encounter more than 20 interactive experiences, 4 life-size models, and dramatic artwork of Martian landscapes. Visitors can send commands to maneuver a rover over a simulated Martian landscape, among many other engaging hands-on opportunities. Additional components of the "MarsQuest" program include a 30-minute planetarium show from Loch Ness Productions narrated by actor Patrick Stewart, best known as Captain Picard of the TV program *Star Trek: The Next Generation*. The MarsQuest Education Program implements onsite, full-day workshops for museum staff and teachers that empower them to use the "MarsQuest" exhibit to share the thrill of scientific discovery with students and the public. Thus far, about 23 scientists have participated in the design, development, and implementation of the "MarsQuest" project. The Space Science Institute led the development of the "MarsQuest" exhibition with major funding from the National Science Foundation and NASA. Additional support was provided by Mitsubishi Digital Electronics America, Inc.; Hewlett-Packard Company; and CBS. For more information on the "MarsQuest" exhibit, please see the Primary URL. For the latest "MarsQuest" itinerary, please see the secondary URL.

Lead: Ms. Lisa Curtis, Space Science Institute, Boulder, CO 80301. E-mail: curtisl@colorado.edu. Phone: 720-974-5821.

Primary URL: <http://www.spacescience.org>

Secondary

URL: <http://www.astc.org/exhibitions/mars/dmars.htm>

Partner(s): Association of Science-Technology Centers

CBS Corporation

Jeff Kennedy Associates, Inc.

Mystic Scenic Studios

National Science Foundation

Passport to Knowledge (P2K)

Randi Korn and Associates, Inc.

University of Colorado, Boulder

Washington, DC

New York, NY

Somerville, MA

Dedham, MA

Arlington, VA

Morristown, NJ

Alexandria, VA

Boulder, CO

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Dec 04	Science Museum of Virginia—Richmond, VA	0	37076	0
01 Feb 05	30 Apr 05	Strategic Air and Space Museum—Ashland, NE	0	12527	0

A361. Meteorite Museum Renovation and Associated Outreach Activities at the University of New Mexico

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: Funding from this grant supports the planning stage of a renovation of the Meteorite Museum at the University of New Mexico (UNM), as well as developing educational opportunities with local teachers. The Museum is open to the public and is a valuable educational resource for the local community. The grant supports evaluation, exhibit design, and the establishment of a virtual museum on the Internet. K–12 teachers are involved in the evaluation of exhibit designs, and a teacher workshop will be held to introduce subject content to the broader education community.

Lead: Dr. Rhian Jones, University of New Mexico, Albuquerque, NM 87131. E-mail: rjones@umn.edu.
Phone: 505-277-1643.

Primary URL: <http://epswww.unm.edu/iom/MeteoriteMuseum.htm>

A362. "Mission to Saturn" Planetarium Show

Theme(s): Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40], Cassini-Huygens Probe[B94]

Description: "Mission to Saturn" describes the Cassini-Huygens mission to explore the beautiful ringed planet Saturn and its many moons. Building on the planetarium program "Ring World," this show provides new imagery and updates on the mission as they occur.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.
Phone: 617-589-4228.

Primary URL: <http://www.mos.org>

Secondary

URL: <http://www.mos.org/nessie>

Scientist(s): Ms. Robin Symonds Museum of Science Boston, MA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	15 Jun 05	Museum of Science—Boston, MA	0	130090	0

A363. "Mysteries of the Milky Way" Planetarium Show

Theme(s): Astrophysics

Msn/Prgm: NESSIE B/F[B40]

Description: "Mysteries of the Milky Way" presents our home galaxy from the inside out. Along the way, it considers new-found evidence for a torrential nucleus, an inner bar surrounded by a ring of starburst activity, spiral arms of gas, dust and newborn stars, and a halo full of ponderous dark matter. The show is supplemented by a handout that gives basic information about the Milky Way and links to recommended literature and Web sites.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.
Phone: 617-589-4228.

Primary URL: <http://www.mos.org>

Secondary

URL: <http://www.mos.org/nessie>

A364. NASA Astrobiology Institute (NAI): NAI Astrobiology Informal Education

Theme(s): Astrophysics, Planetary

Msn/Prgm: NAI[B62]

Description: NAI has pioneered efforts in astrobiology informal education. Spearheading this effort, NAI's NASA Ames Research Center (ARC) Lead: Team has developed a long-term partnership with Yellowstone National Park that has reached several milestones this year. NAI's ARC and Goddard Space Flight Center Lead: Teams provided input and impetus for a Memorandum of Agreement between NASA and the National Park Service; they also jointly led the NASA Explorer Institute "Earth to Sky" program. NAI's ARC Lead: Team updated chapter 4, on thermophiles, to Yellowstone's Resources and Issues Guide, which is used to train Park interpreters; installed nine WaySide Sign Exhibits explaining the astrobiological significance of the Park's hydrothermal features; and

has begun working on plans for astrobiology exhibits at the Park's upcoming Old Faithful Visitor and Education Center. Nine after-school/weekend/summer programs in astrobiology for kids were sponsored by NAI's Lead: Teams, including an ongoing Saturday field trip program sponsored by NAI's Carnegie Institution of Washington Lead: Team; participation in Shared Adventures in Engineering and Science, along with the Indiana University Brownie Math and Science Day, by NAI's Indiana/Princeton/Tennessee Astrobiology Initiative Lead: Team; NAI's Penn State Lead: Team's Ask an Astrobiologist videoconference with students and teachers from Chicago public schools; participation in The Science Study of Navajo Astronomy by NAI's University of California, Los Angeles (UCLA), Lead: Team; and a 10-day summer science camp for girls from NAI's University of Arizona Lead: Team. NAI's University of California, Berkeley, Lead: Team is creating lesson plans for local after-school programs on BioMARS, the science and engineering studies of life in subsurface mines as analogs for Mars. NAI's SETI Institute Lead: Team sponsored scientist lectures at the Alien Earths exhibit at the Lawrence Hall of Science, and NAI's ARC Lead: Team conducted outreach at screenings of the IMAX film Aliens of the Deep at the San Francisco Metreon theater.

Lead: Ms. Krisstina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: Krisstina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: dscalice@mail.arc.nasa.gov.

Primary URL: <http://nai.nasa.gov>

A365. Navigator: Night Sky Network

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Working with the Astronomical Society of the Pacific (ASP), Navigator has created a national Night Sky Network linking hundreds of amateur astronomy clubs around the country through fun and educational demonstration activities (a PlanetQuest Outreach Toolkit), a dedicated Web site, training, compelling visuals, and newsletters. These amateur clubs will have an estimated reach of 100,000 to 200,000 people per year.

Lead: Ms. Marni Berendsen, Astronomical Society of the Pacific, San Francisco, CA 94112.

E-mail: mberendsen@astrosociety.org. Phone: 415-337-1100.

Primary URL: <http://planetquest.jpl.nasa.gov>

Secondary

URL: <http://nightsky.jpl.nasa.gov>

Scientist(s):	Ms. Marni Berendsen	Astronomical Society of the Pacific	San Francisco, CA
	Mr. Michael Greene	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Massimo Stiavelli	Space Telescope Science Institute	Baltimore, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	01 Oct 04	Centennial Lane Elementary School— Ellicott City, MD	0	25	0
01 Oct 04	01 Oct 04	Chugach Stargazer Society—Anchorage, AK	0	50	0
01 Oct 04	30 Sep 05	Astronomical Society of the Pacific— San Francisco, CA	0	120397	0
03 Oct 04	03 Oct 04	Orange County Department of Education— Costa Mesa, CA	0	120	0
03 Oct 04	03 Oct 04	Sheep Hill Astronomical Association— Boonton, NJ	0	3	0
05 Oct 04	05 Oct 04	Middle Tennessee State University— Murfreesboro, TN	0	54	0
06 Oct 04	06 Oct 04	Miami Montessori School—Troy, OH	0	15	0
06 Oct 04	06 Oct 04	Middle Tennessee State University— Murfreesboro, TN	0	40	0
06 Oct 04	06 Oct 04	National Geographic Society—Washington, DC	0	85	0
08 Oct 04	08 Oct 04	Central Florida Astronomical Society, Inc.— Winter Springs, FL	0	10	0
08 Oct 04	08 Oct 04	Des Moines Astronomical Society— Des Moines, IA	0	18	0
08 Oct 04	08 Oct 04	Oregon Science Teachers Association— Salem, OR	0	20	0
08 Oct 04	08 Oct 04	San Jose Astronomical Association— San Jose, CA	0	22	0
08 Oct 04	08 Oct 04	South Florida Science Museum— West Palm Beach, FL	0	87	0
08 Oct 04	08 Oct 04	Women At Work—Pasadena, CA	0	250	0
09 Oct 04	09 Oct 04	Des Moines Astronomical Society— Des Moines, IA	0	28	0
09 Oct 04	09 Oct 04	Orange County HomeGrown—Orleans, IN	0	30	0
09 Oct 04	09 Oct 04	WEBA-TV, Channel 14/Allendale—Columbia, SC	0	11	0
10 Oct 04	10 Oct 04	Final Frontier Astronomy Society—Hoover, AL	0	10	0

10 Oct 04	10 Oct 04	KLTL-TV, Channel 18/Lake Charles— Baton Rouge, LA	0	10	0
10 Oct 04	10 Oct 04	KLTL-TV, Channel 18/Lake Charles— Baton Rouge, LA	0	12	0
10 Oct 04	10 Oct 04	KLTL-TV, Channel 18/Lake Charles— Baton Rouge, LA	0	14	0
11 Oct 04	11 Oct 04	WKMR-TV, Channel 38/Morehead— Lexington, KY	0	15	0
13 Oct 04	13 Oct 04	Jericho Christian Academy-Elementary School— Landover, MD	0	7	0
13 Oct 04	13 Oct 04	Mount Diablo Astronomical Society— Walnut Creek, CA	0	4	0
14 Oct 04	14 Oct 04	Belle Chasse Academy—Belle Chasse, LA	0	120	0
14 Oct 04	14 Oct 04	Birmingham Zoo—Birmingham, AL	0	106	0
14 Oct 04	14 Oct 04	Santa Cruz Astronomy Club—Ben Lomond, CA	0	18	0
14 Oct 04	14 Oct 04	Syosset High School Astronomy Club— Syosset, NY	0	18	0
15 Oct 04	15 Oct 04	Altoona Central Catholic School—Altoona, PA	0	14	0
15 Oct 04	15 Oct 04	Altoona Central Catholic School—Altoona, PA	0	16	0
15 Oct 04	15 Oct 04	Chugach Stargazer Society—Anchorage, AK	0	50	0
15 Oct 04	15 Oct 04	Cincinnati Astronomical Society—Cincinnati, OH	0	30	0
15 Oct 04	15 Oct 04	Kansas Astronomical Observers—Wichita, KS	0	35	0
15 Oct 04	15 Oct 04	Oakwood High School—Dayton, OH	0	60	0
15 Oct 04	15 Oct 04	Tri-Valley StarGazers—Livermore, CA	0	40	0
16 Oct 04	16 Oct 04	Ferguson Observatory—Kenwood, CA	0	21	0
16 Oct 04	16 Oct 04	Kennebunk Boy Scout Troop—Kennebunk, ME	0	30	0
16 Oct 04	16 Oct 04	Mount Diablo Astronomical Society— Walnut Creek, CA	0	25	0
16 Oct 04	16 Oct 04	Northwest Suburban Astronomers— Putum County, IL	0	22	0
16 Oct 04	16 Oct 04	Red River Astronomy Club—Murfreesboro, AR	0	90	0
16 Oct 04	16 Oct 04	Sidney Lanier High School—Austin, TX	0	12	0
16 Oct 04	16 Oct 04	Trotwood-Madison High School—Trotwood, OH	0	12	0
16 Oct 04	16 Oct 04	Young Astronomers of the Amateur Observers' Society (AOS) of New York—North Bellmore, NY	0	16	0
16 Oct 04	17 Oct 04	New Jersey Night Sky—Somerset, NJ	0	20	0
18 Oct 04	18 Oct 04	Astronomical Society of Harrisburg—Harrisburg, PA	0	35	0
19 Oct 04	19 Oct 04	Boonshoft Museum of Discovery—Dayton, OH	0	25	0
19 Oct 04	19 Oct 04	Cub Scout Pack 175—Topeka, KS	0	65	0
19 Oct 04	19 Oct 04	Lakeland School District—Rathdrum, ID	0	200	0
19 Oct 04	19 Oct 04	University of Maryland—College Park, MD	0	11	0
19 Oct 04	19 Oct 04	University of Maryland—College Park, MD	0	12	0
19 Oct 04	19 Oct 04	University of Maryland—College Park, MD	0	18	0
19 Oct 04	19 Oct 04	University of Maryland—College Park, MD	0	21	0
20 Oct 04	20 Oct 04	Austin Elementary School—Baytown, TX	0	19	0
20 Oct 04	20 Oct 04	Austin Elementary School—Baytown, TX	0	21	0
20 Oct 04	20 Oct 04	Austin Elementary School—Baytown, TX	0	24	0
20 Oct 04	20 Oct 04	Brooks Crossing Elementary School— Monmouth Junction, NJ	0	23	0
20 Oct 04	20 Oct 04	Challenger Learning Center of San Antonio— San Antonio, TX	0	14	0
20 Oct 04	20 Oct 04	Fairmont State College—Fairmont, WV	0	19	0
20 Oct 04	20 Oct 04	Fairmont State College—Fairmont, WV	0	24	0
20 Oct 04	20 Oct 04	Mills Elementary School—Bradenton, FL	0	500	0
21 Oct 04	21 Oct 04	Baldwin School of Cambridge—Cambridge, MA	0	18	0
21 Oct 04	21 Oct 04	Eastview Middle School—Bartlett, IL	0	43	0
21 Oct 04	21 Oct 04	Fairmont State College—Fairmont, WV	0	25	0
21 Oct 04	21 Oct 04	Glenn Junior High School—San Angelo, TX	0	27	0
21 Oct 04	21 Oct 04	Kellogg Elementary School—Goleta, CA	0	80	0
21 Oct 04	21 Oct 04	Montgomery County Public Schools— Rockville, MD	0	135	0
21 Oct 04	21 Oct 04	Sallie Zetterower Elementary School— Statesboro, GA	0	200	0
22 Oct 04	22 Oct 04	Hinsdale Public Library—Hinsdale, IL	0	60	0
22 Oct 04	22 Oct 04	Reisterstown Elementary School— Reisterstown, MD	0	27	0
22 Oct 04	22 Oct 04	South Florida Science Museum— West Palm Beach, FL	0	30	0

22 Oct 04	22 Oct 04	Statesboro Astronomy Club—Statesboro, GA	0	140	0
23 Oct 04	23 Oct 04	New Hampshire Astronomical Society— Manchester, NH	0	45	0
23 Oct 04	23 Oct 04	Northeast Kansas Amateur Astronomers' League—Topeka, KS	0	15	0
23 Oct 04	23 Oct 04	Wheaton Park District—Wheaton, IL	0	30	0
24 Oct 04	24 Oct 04	Fairmont State College—Fairmont, WV	0	18	0
25 Oct 04	25 Oct 04	Gloucester County Community College— Sewell, NJ	0	45	0
25 Oct 04	25 Oct 04	Lake Superior Zoological Gardens—Duluth, MN	0	20	0
26 Oct 04	26 Oct 04	Keauhou Cinemas—Keauhou, HI	0	55	0
26 Oct 04	26 Oct 04	Morrison Elementary School—Athens, OH	0	60	0
26 Oct 04	26 Oct 04	Paper Plate Astronomy Education—Granger, IN	0	54	0
26 Oct 04	26 Oct 04	Sacred Heart School—Washington, DC	0	80	0
26 Oct 04	26 Oct 04	University of North Carolina at Pembroke— Pembroke, NC	0	15	0
27 Oct 04	27 Oct 04	Bear Library—Bear, DE	0	23	0
27 Oct 04	27 Oct 04	Children's Discovery Museum—Bloomington, IL	0	11	0
27 Oct 04	27 Oct 04	Darien O'Brien Astronomy Club—Lakewood, CO	0	16	0
27 Oct 04	27 Oct 04	DePaolo Middle School—Southington, CT	0	200	0
27 Oct 04	27 Oct 04	George Long Elementary School—Grass Lake, MI	0	900	0
27 Oct 04	27 Oct 04	Novins Planetarium—Toms River, NJ	0	100	0
27 Oct 04	27 Oct 04	Southworth Planetarium—Portland, ME	0	30	0
28 Oct 04	28 Oct 04	California State University, San Bernardino— San Bernardino, CA	0	26	0
28 Oct 04	28 Oct 04	Federal Hill Elementary School—Baltimore, MD	0	140	0
28 Oct 04	28 Oct 04	Idaho Falls Astronomical Society (IFAS)— Idaho Falls, ID	0	10	0
28 Oct 04	28 Oct 04	Northbrook Park District—Northbrook, IL	0	15	0
28 Oct 04	28 Oct 04	Syosset High School Astronomy Club—Syosset, NY	0	20	0
29 Oct 04	29 Oct 04	Brooks Crossing Elementary School— Monmouth Junction, NJ	0	38	0
29 Oct 04	29 Oct 04	Gheens Science Center and Rauch Planetarium— Louisville, KY	0	100	0
29 Oct 04	29 Oct 04	New Hampshire Astronomical Society— Manchester, NH	0	10	0
29 Oct 04	29 Oct 04	South Florida Science Museum— West Palm Beach, FL	0	65	0
29 Oct 04	29 Oct 04	South Middle School—Grand Forks, ND	0	84	0
30 Oct 04	30 Oct 04	Astronomical Society of Harrisburg— Harrisburg, PA	0	21	0
30 Oct 04	30 Oct 04	Manoa Elementary School—Honolulu, HI	0	117	0
30 Oct 04	30 Oct 04	Tucson Amateur Astronomy Association— Tucson, AZ	0	20	0
01 Nov 04	01 Nov 04	Astronomical Society of Northern New England— Kennebunk, ME	0	100	0
01 Nov 04	01 Nov 04	Boy Scout Troop—Clarksburg, WV	0	30	0
01 Nov 04	01 Nov 04	Fort Wainwright Army Base— Fort Wainwright, AK	0	110	0
01 Nov 04	01 Nov 04	Olympic Astronomical Society—Keyport, WA	0	30	0
02 Nov 04	02 Nov 04	Hawaii Astronomical Society—Honolulu, HI	0	25	0
02 Nov 04	02 Nov 04	Tar River Astronomy Club—Rocky Mount, NC	0	14	0
03 Nov 04	03 Nov 04	Schimelpfenig Middle School Astronomy Club— Plano, TX	0	11	0
03 Nov 04	03 Nov 04	Vernon P. Saxon Aerospace Museum—Boron, CA	0	41	0
04 Nov 04	04 Nov 04	Richland College Planetarium—Dallas, TX	0	21	0
05 Nov 04	05 Nov 04	Barstow Gymnastic Center—Barstow, CA	0	44	0
05 Nov 04	05 Nov 04	Carvers Bay Middle School—Hemingway, SC	0	40	0
05 Nov 04	05 Nov 04	Centennial Lane Elementary School— Ellicott City, MD	0	22	0
05 Nov 04	05 Nov 04	Chugach Stargazer Society—Anchorage, AK	0	50	0
05 Nov 04	05 Nov 04	Elkridge Elementary School—Elkridge, MD	0	18	0
05 Nov 04	05 Nov 04	Middle Tennessee State University— Murfreesboro, TN	0	50	0
05 Nov 04	05 Nov 04	San Mateo Astronomical Society—San Mateo, CA	0	85	0
06 Nov 04	06 Nov 04	Forsyth Country Day School—Pinnacle, NC	0	11	0
06 Nov 04	06 Nov 04	Kansas Astronomical Observers—Wichita, KS	0	4	0
06 Nov 04	06 Nov 04	Wells Mills County Park—Waretown, NJ	0	66	0

06 Nov 04	07 Nov 04	James Randi Educational Foundation— Fort Lauderdale, FL	0	45	0
08 Nov 04	08 Nov 04	Astronomical Society of Harrisburg— Harrisburg, PA	0	45	0
08 Nov 04	08 Nov 04	La Colina Junior High School—Santa Barbara, CA	0	60	0
08 Nov 04	08 Nov 04	Lockwood Park Observatory—Rockford, IL	0	38	0
08 Nov 04	08 Nov 04	Muskegon Astronomical Society—Muskegon, MI	0	15	0
08 Nov 04	08 Nov 04	Northrop Grumman—Linthicum, MD	0	17	0
09 Nov 04	09 Nov 04	Europlanetarium—Genk, Belgium	0	20	0
09 Nov 04	09 Nov 04	Mohawk College—Hamilton, Canada	0	40	0
09 Nov 04	09 Nov 04	NASA Jet Propulsion Laboratory—Pasadena, CA	77	0	0
10 Nov 04	10 Nov 04	Thomas Jefferson High School for Science and Technology Astronomy Club—Alexandria, VA	0	40	0
11 Nov 04	11 Nov 04	Berks County Amateur Astronomical Society— Reading, PA	0	23	0
11 Nov 04	11 Nov 04	McDonogh Elementary School—Owings Mills, MD	0	34	0
11 Nov 04	11 Nov 04	This is True, Inc.—Boulder, CO	0	45	0
11 Nov 04	11 Nov 04	Valencia Middle School—Tucson, AZ	0	159	0
12 Nov 04	12 Nov 04	Centennial Lane Elementary School— Ellicott City, MD	0	27	0
12 Nov 04	12 Nov 04	St. Thomas More Elementary School— Alhambra, CA	0	200	0
12 Nov 04	12 Nov 04	Varna Community Center—Varna, NY	0	148	0
12 Nov 04	12 Nov 04	Walter Hall Elementary School—League City, TX	0	120	0
13 Nov 04	13 Nov 04	Discovery Plus Junior Astronomy Club— Pima, AZ	0	8	0
13 Nov 04	13 Nov 04	Logan Middle School—La Crosse, WI	0	189	0
13 Nov 04	13 Nov 04	Nantucket Elementary School—Nantucket, MA	0	70	0
13 Nov 04	13 Nov 04	Red River Astronomy Club—Murfreesboro, AR	0	17	0
13 Nov 04	13 Nov 04	Statesboro Astronomy Club—Statesboro, GA	0	80	0
13 Nov 04	14 Nov 04	New Jersey Night Sky—Somerset, NJ	0	21	0
15 Nov 04	15 Nov 04	Camp Ramah Elderhostel—Ojai, CA	0	23	0
16 Nov 04	16 Nov 04	Boonshoft Museum of Discovery—Dayton, OH	0	34	0
16 Nov 04	16 Nov 04	Dryden Elementary School—Dryden, NY	0	31	0
16 Nov 04	16 Nov 04	Philip Barbour High School—Philippi, WV	0	12	0
18 Nov 04	18 Nov 04	Central High School—Rapid City, SD	0	250	0
18 Nov 04	18 Nov 04	Final Frontier Astronomy Society—Hoover, AL	0	15	0
18 Nov 04	18 Nov 04	Kirkwood Highway Library—Wilmington, DE	0	11	0
18 Nov 04	18 Nov 04	Nature Conservancy and Del Monte Pineapple Community—Kunia, HI	0	21	0
18 Nov 04	18 Nov 04	Northeast Kansas Amateur Astronomers' League— Topeka, KS	0	15	0
18 Nov 04	18 Nov 04	Perkins Middle School—Akron, OH	0	250	0
18 Nov 04	18 Nov 04	Philip Barbour High School—Philippi, WV	0	12	0
19 Nov 04	19 Nov 04	Chugach Stargazer Society—Anchorage, AK	0	30	0
19 Nov 04	19 Nov 04	Hinsdale Public Library—Hinsdale, IL	0	35	0
19 Nov 04	19 Nov 04	La Tercera Elementary School—Petaluma, CA	0	90	0
19 Nov 04	19 Nov 04	Marion Donaldson Elementary School— Tucson, AZ	0	80	0
19 Nov 04	19 Nov 04	Perry Hall Elementary School—Baltimore, MD	0	50	0
19 Nov 04	19 Nov 04	Statesboro Astronomy Club—Statesboro, GA	0	160	0
19 Nov 04	19 Nov 04	Stony Point Elementary School—Stony Point, NC	0	35	0
20 Nov 04	20 Nov 04	Fairlawn Heights Wesleyan Church—Topeka, KS	0	30	0
20 Nov 04	20 Nov 04	Kittitas Environmental Education Network— Ellensburg, WA	0	250	0
20 Nov 04	20 Nov 04	Marlboro Jewish Center—Marlboro, NJ	0	100	0
20 Nov 04	20 Nov 04	Roland Park Country School—Baltimore, MD	0	25	0
20 Nov 04	20 Nov 04	Young Astronomers of the Amateur Observers' Society (AOS) of New York—North Bellmore, NY	0	10	0
23 Nov 04	23 Nov 04	Lewis Elementary School—Birmingham, AL	0	22	0
23 Nov 04	23 Nov 04	Sowams Elementary School—Barrington, RI	0	70	0
26 Nov 04	26 Nov 04	Chabot Space and Science Center—Oakland, CA	0	35	0
26 Nov 04	26 Nov 04	Stellafane Convention—Springfield, VT	0	7	0
27 Nov 04	27 Nov 04	Astronomical Society of Harrisburg— Harrisburg, PA	0	18	0
29 Nov 04	29 Nov 04	Eastside Astronomical Society—Bellevue, WA	0	30	0
30 Nov 04	30 Nov 04	Agassiz Elementary School—Cambridge, MA	0	15	0
30 Nov 04	30 Nov 04	Jefferson High School—Rockford, IL	0	12	0

01 Dec 04	01 Dec 04	Winchester Public Schools—Winchester, MA	0	68	0
02 Dec 04	02 Dec 04	Bedford County Public Library—Forest, VA	0	20	0
02 Dec 04	02 Dec 04	Carver Magnet—Little Italy, AR	0	50	0
02 Dec 04	02 Dec 04	Discovery Park—Safford, AZ	0	26	0
02 Dec 04	02 Dec 04	Toyon Elementary School—San Jose, CA	0	80	0
03 Dec 04	03 Dec 04	Chugach Stargazer Society—Anchorage, AK	0	20	0
03 Dec 04	03 Dec 04	Kent District Leaders Meeting—Kent, OH	0	15	0
03 Dec 04	03 Dec 04	Middle Tennessee State University— Murfreesboro, TN	0	36	0
03 Dec 04	03 Dec 04	Statesboro Astronomy Club—Statesboro, GA	0	240	0
03 Dec 04	03 Dec 04	Upper Raritan Watershed Association— Bedminster, NJ	0	30	0
05 Dec 04	05 Dec 04	Tomahawk Ranch—Bailey, CO	0	200	0
06 Dec 04	06 Dec 04	Harvard Institute of Learning in Retirement— Cambridge, MA	0	22	0
06 Dec 04	06 Dec 04	University of Texas at Brownsville— Brownsville, TX	0	14	0
07 Dec 04	07 Dec 04	Jhamandas Watumull Planetarium—Honolulu, HI	0	28	0
07 Dec 04	07 Dec 04	Museum of the Rockies—Bozeman, MT	0	26	0
07 Dec 04	07 Dec 04	Tar River Astronomy Club—Rocky Mount, NC	0	20	0
08 Dec 04	08 Dec 04	Final Frontier Astronomy Society—Hoover, AL	0	16	0
08 Dec 04	08 Dec 04	Harrisburg Area Community College— Harrisburg, PA	0	30	0
09 Dec 04	09 Dec 04	Chugach Stargazer Society—Anchorage, AK	0	50	0
09 Dec 04	09 Dec 04	Grassland Elementary School—Brentwood, TN	0	480	0
10 Dec 04	10 Dec 04	Jonata Elementary School—Buellton, CA	0	61	0
11 Dec 04	11 Dec 04	Arizona Schools for the Deaf and Blind— Tucson, AZ	0	60	0
11 Dec 04	11 Dec 04	Birmingham Astronomical Society— Birmingham, AL	0	23	0
11 Dec 04	11 Dec 04	C.C.A. Baldi Middle School—Philadelphia, PA	0	14	0
11 Dec 04	11 Dec 04	Pinellas Science Center—St. Petersburg, FL	0	30	0
11 Dec 04	11 Dec 04	St. Peter in Chains Cub Scouts—Hamilton, OH	0	16	0
11 Dec 04	14 Dec 04	Sirius Lookers Sedona Astronomy Club— Glendale, AZ	0	10	0
13 Dec 04	13 Dec 04	James M. Brown Elementary School— Walhalla, SC	0	20	0
13 Dec 04	13 Dec 04	Liberty Independent School District—Liberty, TX	0	30	0
16 Dec 04	16 Dec 04	Girl Scouts, Spanish Trails Council, Troop 235— Montclair, CA	0	41	0
16 Dec 04	16 Dec 04	North Galveston YMCA—League City, TX	0	120	0
16 Dec 04	16 Dec 04	Santa Barbara Junior High School— Santa Barbara, CA	0	20	0
17 Dec 04	17 Dec 04	Centennial Lane Elementary School— Ellicott City, MD	0	24	0
17 Dec 04	17 Dec 04	Chugach Stargazer Society—Anchorage, AK	0	50	0
17 Dec 04	17 Dec 04	Cincinnati Astronomical Society—Cincinnati, OH	0	50	0
17 Dec 04	17 Dec 04	Texas Astronomical Society of Dallas—Plano, TX	0	60	0
18 Dec 04	18 Dec 04	Astronomical Society of Harrisburg— Harrisburg, PA	0	15	0
18 Dec 04	18 Dec 04	Cabrillo College—Aptos, CA	0	75	0
18 Dec 04	18 Dec 04	Eastbay Astronomical Society—Oakland, CA	0	100	0
18 Dec 04	18 Dec 04	Wesleyan University—Middletown, CT	0	22	0
20 Dec 04	20 Dec 04	Century High School—Eldersburg, MD	0	15	0
20 Dec 04	20 Dec 04	Island County Astronomical Society— Oak Harbor, WA	0	30	0
21 Dec 04	21 Dec 04	Hoyleton Elementary School—Hoyleton, IL	0	25	0
26 Dec 04	26 Dec 04	Chabot Space and Science Center—Oakland, CA	0	21	0
28 Dec 04	28 Dec 04	Brooks Crossing Elementary School— Monmouth Junction, NJ	0	24	0
28 Dec 04	28 Dec 04	Southworth Planetarium—Portland, ME	0	40	0
29 Dec 04	29 Dec 04	Camp Ramah Elderhostel—Ojai, CA	0	45	0
31 Dec 04	31 Dec 04	Lake Superior Zoological Gardens—Duluth, MN	0	20	0
04 Jan 05	04 Jan 05	Mifflinburg Middle School—Mifflinburg, PA	0	100	0
04 Jan 05	04 Jan 05	The Clearings—Sturgeon Bay, WI	0	10	0
06 Jan 05	06 Jan 05	Ames Child Care Center—Moffett Field, CA	0	21	0
07 Jan 05	07 Jan 05	Darien O'Brien Astronomy Club—Lakewood, CO	0	17	0

07 Jan 05	07 Jan 05	San Jose Astronomical Association— San Jose, CA	0	15	0
08 Jan 05	08 Jan 05	Red River Astronomy Club—Murfreesboro, AR	0	25	0
08 Jan 05	08 Jan 05	San Diego Astronomy Association— San Diego, CA	0	16	0
09 Jan 05	09 Jan 05	Elks Club—Boulder, CO	0	60	0
10 Jan 05	10 Jan 05	Monte Vista High School—Cupertino, CA	0	25	0
10 Jan 05	10 Jan 05	Penobscot Valley Star Gazers—Bangor, ME	0	13	0
10 Jan 05	10 Jan 05	Pinecrest Elementary School— Thousand Oaks, CA	0	100	0
11 Jan 05	11 Jan 05	Black Canyon Astronomical Society— Montrose, CO	0	12	0
13 Jan 05	13 Jan 05	Orange County Department of Education— Costa Mesa, CA	0	25	0
13 Jan 05	13 Jan 05	Rio Rancho Mid-High Astronauts— Rio Rancho, NM	0	8	0
14 Jan 05	14 Jan 05	BSA Troop 214, Columbia—Columbia, MO	0	15	0
14 Jan 05	14 Jan 05	Coupeville Middle School—Coupeville, WA	0	40	0
14 Jan 05	14 Jan 05	Hohl Elementary School—Houston, TX	0	120	0
14 Jan 05	14 Jan 05	Jubilee Outreach Center—Dallas, TX	0	65	0
14 Jan 05	14 Jan 05	Private residence—Dallas, GA	0	23	0
14 Jan 05	14 Jan 05	Rio Rancho Astronomical Society— Rio Rancho, NM	0	25	0
15 Jan 05	15 Jan 05	Bedie Post's Church—Sanger, TX	0	30	0
15 Jan 05	15 Jan 05	Delaware Astronomical Society—Newark, DE	0	22	0
15 Jan 05	15 Jan 05	Griffith Observatory and Planetarium— Los Angeles, CA	0	22	0
15 Jan 05	15 Jan 05	Lockwood Park Observatory—Rockford, IL	0	36	0
16 Jan 05	16 Jan 05	Hampshire County Federation Women's Institute— Bristol, NH	0	57	0
16 Jan 05	16 Jan 05	Space Education Initiatives—Green Bay, WI	0	50	0
17 Jan 05	17 Jan 05	Century High School—Eldersburg, MD	0	10	0
18 Jan 05	18 Jan 05	Contra Costa Christian Schools— Walnut Creek, CA	0	30	0
20 Jan 05	20 Jan 05	Fruitland Elementary School—Puyallup, WA	0	150	0
20 Jan 05	20 Jan 05	Texas Space Grant Consortium—Austin, TX	0	47	0
20 Jan 05	20 Jan 05	Texas Space Grant Consortium—Austin, TX	0	48	0
20 Jan 05	20 Jan 05	Texas Space Grant Consortium—Austin, TX	0	55	0
20 Jan 05	20 Jan 05	Texas Space Grant Consortium—Austin, TX	0	222	0
20 Jan 05	20 Jan 05	University of Memphis—Memphis, TN	0	15	0
21 Jan 05	21 Jan 05	Amarillo Astronomy Club—Amarillo, TX	0	30	0
21 Jan 05	21 Jan 05	Area Education Agency—Cedar Falls, IA	0	75	0
21 Jan 05	21 Jan 05	Statesboro Astronomy Club—Statesboro, GA	0	130	0
21 Jan 05	21 Jan 05	Vanden High School—Fairfield, CA	0	72	0
22 Jan 05	22 Jan 05	Explorit Science Center—Davis, CA	0	75	0
22 Jan 05	22 Jan 05	Old World Astronomy Club—Wellsville, NY	0	19	0
22 Jan 05	22 Jan 05	The Apollo Society—Honolulu, HI	0	20	0
23 Jan 05	23 Jan 05	Monte Vista High School—Cupertino, CA	0	25	0
23 Jan 05	23 Jan 05	Warm Springs Elementary School— San Bernardino, CA	0	26	0
24 Jan 05	24 Jan 05	Old Richmond Elementary School— Tobaccoville, NC	0	570	0
25 Jan 05	25 Jan 05	Austin Elementary School—Baytown, TX	0	39	0
25 Jan 05	25 Jan 05	Montgomery College—Conroe, TX	0	20	0
25 Jan 05	25 Jan 05	University of Wisconsin-Green Bay— Green Bay, WI	0	27	0
27 Jan 05	27 Jan 05	North Whidbey—Oak Harbor, WA	0	21	0
27 Jan 05	27 Jan 05	North Whidbey—Oak Harbor, WA	0	76	0
27 Jan 05	27 Jan 05	Palm Beach Day School—Palm Beach, FL	0	9	0
28 Jan 05	28 Jan 05	Hilo Intermediate School—Hilo, HI	0	70	0
28 Jan 05	28 Jan 05	North Houston Astronomy Club—Kingwood, TX	0	73	0
28 Jan 05	28 Jan 05	Texas Astronomical Society of Dallas—Plano, TX	0	11	0
29 Jan 05	29 Jan 05	Midway Museum—San Diego, CA	0	45	0
31 Jan 05	31 Jan 05	Watkins Mill Astronomy Club—Gaithersburg, MD	0	10	0
01 Feb 05	01 Feb 05	Hampshire County Federation Women's Institute— Bristol, NH	0	300	0
01 Feb 05	01 Feb 05	Sunrise Elementary School—Spokane, WA	0	150	0
01 Feb 05	01 Feb 05	Thornhill Elementary School—Oakland, CA	0	27	0

02 Feb 05	02 Feb 05	McGaugh Elementary School—Forrest Falls, CA	0	32	0
02 Feb 05	02 Feb 05	Woodside Elementary School—Woodside, CA	0	24	0
04 Feb 05	04 Feb 05	Jackson Astronomical Association—Jackson, MS	0	18	0
05 Feb 05	05 Feb 05	Huachuca Astronomy Club—Hereford, AZ	0	14	0
05 Feb 05	05 Feb 05	St. Paul Youth Fellowship—Fort Davis, TX	0	0	0
05 Feb 05	05 Feb 05	The College of William and Mary in Virginia— Williamsburg, VA	0	26	0
07 Feb 05	07 Feb 05	Kearney High School—Kearney, MO	0	31	0
07 Feb 05	07 Feb 05	Kearney High School—Kearney, MO	0	35	0
07 Feb 05	07 Feb 05	The Governor's Institutes of Vermont— Montpelier, VT	0	10	0
07 Feb 05	07 Feb 05	University of Texas at Brownsville— Brownsville, TX	0	12	0
08 Feb 05	08 Feb 05	Amateur Astronomers of Jackson—Jackson, MI	0	12	0
08 Feb 05	08 Feb 05	Barstow School—Kansas City, MO	0	22	0
08 Feb 05	08 Feb 05	Barstow School—Kansas City, MO	0	28	0
08 Feb 05	08 Feb 05	Barstow School—Kansas City, MO	0	39	0
09 Feb 05	09 Feb 05	Barstow School—Kansas City, MO	0	31	0
09 Feb 05	09 Feb 05	Barstow School—Kansas City, MO	0	32	0
09 Feb 05	09 Feb 05	Barstow School—Kansas City, MO	0	36	0
10 Feb 05	10 Feb 05	Chippewa Valley Astronomical Society— Eau Claire, WI	0	30	0
10 Feb 05	10 Feb 05	Fire Prairie Middle School—Independence, MO	0	28	0
10 Feb 05	10 Feb 05	Fire Prairie Middle School—Independence, MO	0	37	0
10 Feb 05	10 Feb 05	Fire Prairie Middle School—Independence, MO	0	50	0
10 Feb 05	10 Feb 05	Fire Prairie Middle School—Independence, MO	0	52	0
10 Feb 05	10 Feb 05	Sonoma County Astronomical Society— Santa Rosa, CA	0	60	0
10 Feb 05	10 Feb 05	Thornhill Elementary School—Oakland, CA	0	27	0
11 Feb 05	11 Feb 05	Freeport McMoRan Daily Living Science Center— Kenner, LA	0	18	0
11 Feb 05	11 Feb 05	Hinsdale Public Library—Hinsdale, IL	0	50	0
11 Feb 05	11 Feb 05	Kearney Junior High School—Kearney, MO	0	28	0
11 Feb 05	11 Feb 05	Kearney Junior High School—Kearney, MO	0	33	0
11 Feb 05	11 Feb 05	Kearney Junior High School—Kearney, MO	0	37	0
11 Feb 05	11 Feb 05	Kearney Junior High School—Kearney, MO	0	42	0
11 Feb 05	11 Feb 05	Macquarie University—Sydney, Australia	0	120	0
11 Feb 05	11 Feb 05	Putnam Vocational Technical High School— Springfield, MA	0	250	0
11 Feb 05	11 Feb 05	Russell Junior High—Oakland, CA	0	28	0
11 Feb 05	11 Feb 05	Russell Junior High—Oakland, CA	0	30	0
11 Feb 05	11 Feb 05	San Diego Astronomy Association—San Diego, CA	0	40	0
11 Feb 05	11 Feb 05	San Diego Astronomy Association— San Diego, CA	0	41	0
12 Feb 05	12 Feb 05	Hampshire County Federation Women's Institute—Bristol, NH	0	17	0
12 Feb 05	12 Feb 05	Hilo Intermediate School—Hilo, HI	0	80	0
12 Feb 05	12 Feb 05	Logan Middle School—La Crosse, WI	0	55	0
12 Feb 05	12 Feb 05	San Diego Astronomy Association— San Diego, CA	0	24	0
12 Feb 05	12 Feb 05	San Diego Astronomy Association— San Diego, CA	0	30	0
12 Feb 05	12 Feb 05	San Diego Astronomy Association— San Diego, CA	0	33	0
12 Feb 05	12 Feb 05	Treasure Coast Astronomical Society— Fort Pierce, FL	0	35	0
12 Feb 05	12 Feb 05	U.S. Air Force Hurlbut Field's Base Library— Fort Walton Beach, FL	0	300	0
14 Feb 05	14 Feb 05	Monte Vista High School—Cupertino, CA	0	17	0
15 Feb 05	15 Feb 05	Montgomery College—Conroe, TX	0	18	0
15 Feb 05	15 Feb 05	Richland College Planetarium—Dallas, TX	0	40	0
15 Feb 05	15 Feb 05	Sonoma County Astronomical Society— Santa Rosa, CA	0	33	0
15 Feb 05	15 Feb 05	Union Ridge School—Harwood Heights, IL	0	50	0
16 Feb 05	16 Feb 05	Challenger Learning Center of San Antonio— San Antonio, TX	0	18	0
16 Feb 05	16 Feb 05	Kingwood College Astronomy Class— Kingwood, TX	0	41	0

16 Feb 05	16 Feb 05	Maryland State Board of Education— Baltimore, MD	0	11	0
16 Feb 05	16 Feb 05	McKinley Elementary School— Santa Barbara, CA	0	43	0
17 Feb 05	17 Feb 05	Eastbay Astronomical Society—Oakland, CA	0	150	0
17 Feb 05	17 Feb 05	Hoover Elementary School—Oakland, CA	0	50	0
17 Feb 05	17 Feb 05	Magnet Middle School for the Arts— Holyoke, MA	0	31	0
17 Feb 05	17 Feb 05	Maryvale School District—Cheektowaga, NY	0	85	0
17 Feb 05	17 Feb 05	Middle Tennessee State University— Murfreesboro, TN	0	45	0
18 Feb 05	18 Feb 05	Amateur Astronomers, Inc.—Cranford, NJ	0	100	0
18 Feb 05	18 Feb 05	Jefferson-Houston School for Arts and Academics—Alexandria, VA	0	300	0
18 Feb 05	18 Feb 05	Kansas City Science City, Union Station Museum—Kansas City, MO	0	12	0
18 Feb 05	18 Feb 05	The Apollo Society—Honolulu, HI	0	20	0
18 Feb 05	18 Feb 05	Universities Space Research Association— Columbia, MD	0	35	0
19 Feb 05	19 Feb 05	High Desert Astronomical Society— Apple Valley, CA	0	14	0
19 Feb 05	20 Feb 05	TechFest 2005—Dayton, OH	0	300	0
20 Feb 05	20 Feb 05	TechFest 2005—Dayton, OH	0	300	0
22 Feb 05	22 Feb 05	Barnes & Noble Bookstore—Winston-Salem, NC	0	150	0
22 Feb 05	22 Feb 05	Broadview Elementary School—Oak Harbor, WA	0	18	0
22 Feb 05	22 Feb 05	Delta High School—Delta, CO	0	10	0
23 Feb 05	23 Feb 05	Lakeview Elementary School—Bloomington, IN	0	30	0
23 Feb 05	23 Feb 05	Orange County Department of Education— Costa Mesa, CA	0	150	0
23 Feb 05	23 Feb 05	University Elementary School—Bloomington, IN	0	70	0
24 Feb 05	24 Feb 05	Brandon Elementary School—Goleta, CA	0	129	0
24 Feb 05	24 Feb 05	Harvard-Smithsonian Center for Astrophysics— Cambridge, MA	0	73	0
24 Feb 05	24 Feb 05	Holiday Inn Rapid City—Rapid City, SD	0	25	0
24 Feb 05	24 Feb 05	Northeast Kansas Amateur Astronomers' League—Topeka, KS	0	14	0
24 Feb 05	24 Feb 05	Piedmont Club—Winston-Salem, NC	0	38	0
25 Feb 05	25 Feb 05	North Houston Astronomy Club—Kingwood, TX	0	61	0
25 Feb 05	25 Feb 05	St. Angela Merici School—Metairie, LA	0	100	0
25 Feb 05	25 Feb 05	Texas Astronomical Society of Dallas—Plano, TX	0	13	0
26 Feb 05	26 Feb 05	Bureau of Land Management—Las Vegas, NV	0	35	0
26 Feb 05	26 Feb 05	Hilo Intermediate School—Hilo, HI	0	25	0
26 Feb 05	26 Feb 05	Lawrence Technological University— Southfield, MI	0	30	0
26 Feb 05	26 Feb 05	New Jersey Astronomical Association (NJAA)— High Bridge, NJ	0	80	0
27 Feb 05	27 Feb 05	Institute for Astronomy—Hilo, HI	0	6	0
28 Feb 05	28 Feb 05	Adams Elementary School—Spokane, WA	0	200	0
01 Mar 05	01 Mar 05	Hawaii Astronomical Society—Honolulu, HI	0	38	0
01 Mar 05	01 Mar 05	Middle Tennessee State University— Murfreesboro, TN	0	20	0
02 Mar 05	02 Mar 05	Middle Tennessee State University— Murfreesboro, TN	0	40	0
03 Mar 05	03 Mar 05	Beebe Elementary School—Naperville, IL	0	15	0
03 Mar 05	03 Mar 05	Blossom Valley Elementary School—El Cajon, CA	0	40	0
03 Mar 05	03 Mar 05	Middle Tennessee State University— Murfreesboro, TN	0	35	0
03 Mar 05	03 Mar 05	Prairie Creek Elementary School— Richardson, TX	0	300	0
03 Mar 05	03 Mar 05	Prospect Elementary School—Cleveland, TN	0	11	0
03 Mar 05	03 Mar 05	The Odyssey School—Baltimore, MD	0	21	0
04 Mar 05	04 Mar 05	Imagine Nation Children's Museum—Bristol, CT	0	100	0
04 Mar 05	04 Mar 05	USS Midway—San Diego, CA	0	50	0
05 Mar 05	05 Mar 05	Franklin Elementary School—Burlingame, CA	0	40	0
05 Mar 05	05 Mar 05	Mary E. Curley Middle School— Jamaica Plain, MA	0	30	0
05 Mar 05	05 Mar 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	10	0

05 Mar 05	05 Mar 05	Palm Glades Girl Scout Council Camp Welaka— Hobe Sound, FL	0	30	0
07 Mar 05	07 Mar 05	Doyle/Ryder Community Elementary School— Flint, MI	0	16	0
07 Mar 05	07 Mar 05	Meadows Elementary School—Petaluma, CA	0	80	0
07 Mar 05	07 Mar 05	Sacred Hearts Academy—Honolulu, HI	0	13	0
08 Mar 05	08 Mar 05	Christa McAuliffe Planetarium—Concord, NH	0	18	0
08 Mar 05	08 Mar 05	Huachuca Oaks Campground—Hereford, AZ	0	60	0
08 Mar 05	08 Mar 05	Kriewald Elementary School—San Antonio, TX	0	50	0
08 Mar 05	08 Mar 05	Southeast Ohio Astronomical Society— Athens, OH	0	10	0
08 Mar 05	08 Mar 05	Thornhill Elementary School—Oakland, CA	0	27	0
09 Mar 05	09 Mar 05	Chugach Stargazer Society—Anchorage, AK	0	60	0
10 Mar 05	10 Mar 05	Nellis Air Force Base—Nellis Air Force Base, NV	0	8	0
10 Mar 05	10 Mar 05	Sowams Elementary School—Barrington, RI	0	180	0
11 Mar 05	11 Mar 05	Amateur Telescope Makers of Boston— Westford, MA	0	10	0
11 Mar 05	11 Mar 05	Nui Valley Middle School—Honolulu, HI	0	38	0
11 Mar 05	11 Mar 05	South Park Christian School—Tulsa, OK	0	40	0
12 Mar 05	12 Mar 05	“Science News”—Washington, DC	0	6	0
12 Mar 05	12 Mar 05	Central Florida Astronomical Society, Inc.— Winter Springs, FL	0	21	0
12 Mar 05	12 Mar 05	Darien O’Brien Astronomy Club—Lakewood, CO	0	15	0
12 Mar 05	12 Mar 05	Eastbay Astronomical Society—Oakland, CA	0	30	0
12 Mar 05	12 Mar 05	Eastbay Astronomical Society—Oakland, CA	0	32	0
12 Mar 05	12 Mar 05	Fairview Elementary School—Texarkana, AR	0	200	0
12 Mar 05	12 Mar 05	Red River Astronomy Club—Murfreesboro, AR	0	20	0
12 Mar 05	12 Mar 05	Tacoma Astronomical Society—Tacoma, WA	0	10	0
14 Mar 05	14 Mar 05	Faber Elementary School—Dunellen, NJ	0	120	0
15 Mar 05	15 Mar 05	Bernard Eldridge Elementary School— Petaluma, CA	0	65	0
15 Mar 05	15 Mar 05	Christa McAuliffe Planetarium—Concord, NH	0	16	0
15 Mar 05	15 Mar 05	Manchester Avenue School—Los Angeles, CA	0	20	0
15 Mar 05	15 Mar 05	Nellis Air Force Base—Nellis Air Force Base, NV	0	12	0
15 Mar 05	15 Mar 05	St. Patrick’s School—Chatham, NJ	0	39	0
16 Mar 05	16 Mar 05	College for Kids—Cranford, NJ	0	20	0
16 Mar 05	16 Mar 05	Sacred Hearts Academy—Honolulu, HI	0	13	0
17 Mar 05	17 Mar 05	Boysville of San Antonio—San Antonio, TX	0	60	0
17 Mar 05	17 Mar 05	Midvale Elementary School—Midvale, OH	0	70	0
18 Mar 05	18 Mar 05	Amateur Astronomers, Inc.—Cranford, NJ	0	115	0
18 Mar 05	18 Mar 05	Around the Clock Child Care—San Angelo, TX	0	18	0
18 Mar 05	18 Mar 05	Eagle River Nature Center—Eagle River, AK	0	35	0
18 Mar 05	18 Mar 05	Families Under Urban & Social Attack, Inc.— Houston, TX	0	43	0
18 Mar 05	18 Mar 05	North County Library—Greensboro, MD	0	41	0
18 Mar 05	18 Mar 05	USS Midway—San Diego, CA	0	42	0
18 Mar 05	18 Mar 05	USS Midway—San Diego, CA	0	44	0
18 Mar 05	18 Mar 05	USS Midway—San Diego, CA	0	46	0
18 Mar 05	18 Mar 05	USS Midway—San Diego, CA	0	70	0
19 Mar 05	19 Mar 05	Boy Scout Troop 120—Seneca, SC	0	16	0
19 Mar 05	19 Mar 05	Elgin Air Force Base—Elgin Air Force Base, FL	0	37	0
19 Mar 05	19 Mar 05	J. Leigh School—Norridge, IL	0	38	0
19 Mar 05	19 Mar 05	Lawrence Technological University— Southfield—MI	0	15	0
19 Mar 05	19 Mar 05	Peck Farm Park—Geneva, IL	0	5	0
19 Mar 05	19 Mar 05	Vandenberg Air Force Base— Vandenberg Air Force Base, CA	0	160	0
19 Mar 05	19 Mar 05	Voorhees High School Astro Club— High Bridge, NJ	0	300	0
19 Mar 05	19 Mar 05	Whidbey Island 4-H Clubs—Coupeville, WA	0	15	0
21 Mar 05	21 Mar 05	Laurelwood Elementary School—Sunnyvale, CA	0	200	0
21 Mar 05	21 Mar 05	Roanoke Valley Astronomical Society— Roanoke, VA	0	27	0
22 Mar 05	22 Mar 05	Beaumont Elementary School Boy Scout Pack 4161—Green Bay, WI	0	47	0
22 Mar 05	22 Mar 05	Christa McAuliffe Planetarium—Concord, NH	0	16	0
22 Mar 05	22 Mar 05	Orange County Department of Education— Costa Mesa, CA	0	28	0

23 Mar 05	23 Mar 05	Broadview Elementary School—Oak Harbor, WA	0	80	0
23 Mar 05	23 Mar 05	Orange County Department of Education—Costa Mesa, CA	0	28	0
24 Mar 05	24 Mar 05	North Whidbey—Oak Harbor, WA	0	23	0
24 Mar 05	24 Mar 05	North Whidbey—Oak Harbor, WA	0	80	0
24 Mar 05	24 Mar 05	Oak Harbor Middle School—Oak Harbor, WA	0	20	0
24 Mar 05	24 Mar 05	Oak Harbor Middle School—Oak Harbor, WA	0	24	0
24 Mar 05	24 Mar 05	Oak Harbor Middle School—Oak Harbor, WA	0	25	0
24 Mar 05	24 Mar 05	Oak Harbor Middle School—Oak Harbor, WA	0	26	0
24 Mar 05	24 Mar 05	Woodbury Middle School—Woodbury, CT	0	147	0
25 Mar 05	25 Mar 05	Amateur Astronomers, Inc.—Cranford, NJ	0	50	0
25 Mar 05	25 Mar 05	Northeast Florida Astronomical Society—Jacksonville, FL	0	19	0
26 Mar 05	26 Mar 05	This is True, Inc.—Boulder, CO	0	40	0
28 Mar 05	28 Mar 05	Dunellen Public Library—Dunellen, NJ	0	20	0
28 Mar 05	28 Mar 05	Holiday Inn Select—Phoenix, AZ	0	103	0
29 Mar 05	29 Mar 05	Fairlawn Elementary School—Fort Pierce, FL	0	27	0
29 Mar 05	29 Mar 05	Sunset Hills Elementary School—San Diego, CA	0	200	0
30 Mar 05	30 Mar 05	East Brentwood Presbyterian Church—Brentwood, TN	0	50	0
30 Mar 05	30 Mar 05	Palm Beach Day School—Palm Beach, FL	0	16	0
31 Mar 05	31 Mar 05	Fairlawn Elementary School—Fort Pierce, FL	0	18	0
31 Mar 05	31 Mar 05	Monlux Elementary School—North Hollywood, CA	0	250	0
31 Mar 05	31 Mar 05	Myer Elementary School—Fort Huachuca Army Base, AZ	0	150	0
01 Apr 05	01 Apr 05	Cross Ranch State Park—Bismarck, ND	0	37	0
01 Apr 05	01 Apr 05	North School District Kids and Parents—Mount Carmel, IL	0	500	0
01 Apr 05	01 Apr 05	Spokane Astronomical Society—Spokane, WA	0	200	0
01 Apr 05	01 Apr 05	Stanislaus Amateur Astronomers—Modesto, CA	0	18	0
02 Apr 05	02 Apr 05	Chattanooga Zoo at Warner Park—Chattanooga, TN	0	24	0
02 Apr 05	02 Apr 05	Dayton Area Mensa—Dayton, OH	0	15	0
02 Apr 05	02 Apr 05	St. Joseph College Academy—Rensselaer, IN	0	25	0
05 Apr 05	05 Apr 05	Hawaii Astronomical Society—Honolulu, HI	0	35	0
05 Apr 05	05 Apr 05	Middle Tennessee State University—Murfreesboro, TN	0	21	0
05 Apr 05	05 Apr 05	Nimitz Middle School—San Antonio, TX	0	120	0
05 Apr 05	05 Apr 05	San Angelo Amateur Astronomy Association—San Angelo, TX	0	19	0
05 Apr 05	05 Apr 05	Somerville High School—Somerville, MA	0	15	0
06 Apr 05	06 Apr 05	Hawthorne School Oakland—Oakland, CA	0	29	0
06 Apr 05	06 Apr 05	Hoover Elementary School—Oakland, CA	0	30	0
08 Apr 05	08 Apr 05	Discovery School—Tarzana, CA	0	50	0
08 Apr 05	08 Apr 05	Santa Cruz Astronomy Club—Ben Lomond, CA	0	15	0
08 Apr 05	08 Apr 05	Southeast Middle School—Kernersville, NC	0	213	0
08 Apr 05	08 Apr 05	USS Midway—San Diego, CA	0	20	0
08 Apr 05	08 Apr 05	USS Midway—San Diego, CA	0	25	0
08 Apr 05	08 Apr 05	USS Midway—San Diego, CA	0	30	0
08 Apr 05	08 Apr 05	Vesey Elementary School—Tucson, AZ	0	42	0
09 Apr 05	09 Apr 05	Chaplin Nature Center—Arkansas City, KS	0	21	0
09 Apr 05	09 Apr 05	Fremont Peak Observatory Association—San Juan Bautista, CA	0	30	0
09 Apr 05	09 Apr 05	Ridgewood High School—Norridge, IL	0	65	0
10 Apr 05	10 Apr 05	University of Hawaii at Manoa—Honolulu, HI	0	168	0
11 Apr 05	11 Apr 05	Chatham High School—Chatham, NJ	0	56	0
12 Apr 05	12 Apr 05	Cardinal Sheehan School—Baltimore, MD	0	61	0
12 Apr 05	12 Apr 05	Texas Outdoor Women's Network—San Antonio, TX	0	25	0
12 Apr 05	12 Apr 05	Westwood Elementary School—Memphis, TN	0	150	0
13 Apr 05	13 Apr 05	Astronomy students at Skyline High School—Dallas, TX	0	70	0
13 Apr 05	13 Apr 05	Central Florida Astronomical Society, Inc.—Winter Springs, FL	0	25	0
14 Apr 05	14 Apr 05	Arizona State University—Tempe, AZ	0	35	0
14 Apr 05	14 Apr 05	Copper Creek Elementary School—Tucson, AZ	0	150	0
14 Apr 05	14 Apr 05	Iverson Elementary School—Las Vegas, NV	0	48	0
14 Apr 05	14 Apr 05	Leighton Elementary School—Aurora, OH	0	300	0

14 Apr 05	14 Apr 05	Neal Elementary School—Bryan, TX	0	170	0
14 Apr 05	14 Apr 05	North Eugene High School—Cheshire, OR	0	1	0
15 Apr 05	15 Apr 05	Chouteau High School—Chouteau, OK	0	100	0
15 Apr 05	15 Apr 05	Coleman Elementary School—Coleman, TX	0	80	0
15 Apr 05	15 Apr 05	DuPage Regional Office of Education—Bensenville, IL	0	29	0
15 Apr 05	15 Apr 05	Northern Trails Area Education Agency— Clear Lake, IA	0	70	0
15 Apr 05	15 Apr 05	Parkmead Elementary School—Walnut Creek, CA	0	50	0
15 Apr 05	15 Apr 05	Sirius Lookers Sedona Astronomy Club— Glendale, AZ	0	200	0
15 Apr 05	15 Apr 05	Upper Raritan Watershed Association— Bedminster, NJ	0	58	0
15 Apr 05	15 Apr 05	Wilson Elementary School—Petaluma, CA	0	100	0
16 Apr 05	16 Apr 05	Adventure Science Center—Nashville, TN	0	200	0
16 Apr 05	16 Apr 05	Barnes & Noble Bookstore—Winston-Salem, NC	0	200	0
16 Apr 05	16 Apr 05	Benson West Elementary School—Omaha, NE	0	110	0
16 Apr 05	16 Apr 05	Central Florida Astronomical Society, Inc.— Winter Springs, FL	0	200	0
16 Apr 05	16 Apr 05	Chabot Space and Science Center—Oakland, CA	0	60	0
16 Apr 05	16 Apr 05	Darien O'Brien Astronomy Club—Lakewood, CO	0	16	0
16 Apr 05	16 Apr 05	Flint River Astronomy Club—Fayetteville, GA,	0	180	0
16 Apr 05	16 Apr 05	Fremont Peak Observatory Association— San Juan Bautista, CA	0	50	0
16 Apr 05	16 Apr 05	Griffith Observatory and Planetarium— Los Angeles, CA	0	60	0
16 Apr 05	16 Apr 05	Hampshire County Federation Women's Institute—Bristol, NH	0	76	0
16 Apr 05	16 Apr 05	Holiday Inn Rapid City—Rapid City, SD	0	252	0
16 Apr 05	16 Apr 05	Kansas City Science City, Union Station Museum—Kansas City, MO	0	1000	0
16 Apr 05	16 Apr 05	Morris Museum—Morristown, NJ	0	184	0
16 Apr 05	16 Apr 05	Private residence—Newton, MA	0	200	0
16 Apr 05	16 Apr 05	Robert A. Church Elementary School— Memphis, TN	0	300	0
16 Apr 05	16 Apr 05	Salt Lake Astronomical Society— Stansbury Park, UT	0	1000	0
16 Apr 05	16 Apr 05	San Diego Astronomy Association— San Diego, CA	0	70	0
16 Apr 05	16 Apr 05	Sea Isle Elementary School—Memphis, TN	0	33	0
16 Apr 05	16 Apr 05	Sirius Lookers Sedona Astronomy Club— Glendale, AZ	0	400	0
16 Apr 05	16 Apr 05	This is True, Inc.—Boulder, CO	0	50	0
16 Apr 05	16 Apr 05	Von Braun Astronomical Society—Huntsville, AL	0	200	0
16 Apr 05	17 Apr 05	Stone Mountain State Park—Roaring Gap, NC	0	130	0
19 Apr 05	19 Apr 05	Chugiak High School—Eagle River, AK	0	90	0
19 Apr 05	19 Apr 05	Holling Heights Elementary School—Omaha, NE	0	40	0
19 Apr 05	19 Apr 05	Munster Cub Scout Pack 505—Munster, IN	0	40	0
19 Apr 05	19 Apr 05	Owings Mills Elementary School— Owings Mills, MD	0	100	0
19 Apr 05	19 Apr 05	Richland College Planetarium—Dallas, TX	0	46	0
19 Apr 05	19 Apr 05	Toyon Elementary School—San Jose, CA	0	32	0
20 Apr 05	20 Apr 05	Faith Lutheran Church—Eldersburg, MD	0	70	0
21 Apr 05	21 Apr 05	Acalanes High School—Lafayette, CA	0	30	0
21 Apr 05	21 Apr 05	North Eugene High School—Cheshire, OR	0	8	0
21 Apr 05	21 Apr 05	Waimea Elementary School—Kamuela, HI	0	24	0
22 Apr 05	22 Apr 05	Harrison Elementary School—Livingston, NJ	0	66	0
22 Apr 05	22 Apr 05	Lamar Elementary School—Wichita Falls, TX	0	40	0
23 Apr 05	23 Apr 05	Hampshire County Federation Women's Institute—Bristol, NH	0	48	0
23 Apr 05	23 Apr 05	This is True, Inc.—Boulder, CO	0	15	0
23 Apr 05	23 Apr 05	This is True, Inc.—Boulder, CO	0	50	0
25 Apr 05	25 Apr 05	Hampshire County Federation Women's Institute—Bristol, NH	0	130	0
25 Apr 05	25 Apr 05	Junction City High School—Junction City, KS	0	58	0
25 Apr 05	25 Apr 05	Minnesota State Parks/Department of Natural Resources—St. Paul, MN	0	83	0
25 Apr 05	25 Apr 05	Theodore Roosevelt Middle School—Eugene, OR	0	5	0
26 Apr 05	26 Apr 05	Honoka'a High School—Honoka'a, HI	0	250	0

27 Apr 05	27 Apr 05	Cradle of Aviation Museum—Garden City, NY	0	41	0
27 Apr 05	27 Apr 05	Huachuca Oaks Nature Camp—Hereford, AZ	0	40	0
27 Apr 05	27 Apr 05	North Layton Junior High Learning Center— Layton, UT	0	10	0
28 Apr 05	28 Apr 05	Arlington Middle School—Gretna, NE	0	100	0
29 Apr 05	29 Apr 05	Boerne Homeschoolers—Boerne, TX	0	50	0
29 Apr 05	29 Apr 05	Palos Verdes Peninsula Library— Rancho Palos Verdes, CA	0	40	0
29 Apr 05	29 Apr 05	St. Mary's College of Maryland— St. Mary's City, MD	0	110	0
29 Apr 05	29 Apr 05	Teatro de Bayamon, Bravlio Castillo— Bayamon, Puerto Rico	0	700	0
29 Apr 05	29 Apr 05	USS Midway—San Diego, CA	0	40	0
29 Apr 05	29 Apr 05	USS Midway—San Diego, CA	0	48	0
29 Apr 05	29 Apr 05	USS Midway—San Diego, CA	0	52	0
29 Apr 05	29 Apr 05	USS Midway—San Diego, CA	0	58	0
29 Apr 05	29 Apr 05	USS Midway—San Diego, CA	0	60	0
29 Apr 05	02 May 05	Denver Museum of Natural History—Denver, CO	0	22	0
30 Apr 05	30 Apr 05	Holland Happenings Festival—Oak Harbor, WA	0	500	0
30 Apr 05	30 Apr 05	Nantucket Elementary School—Nantucket, MA	0	120	0
01 May 05	01 May 05	University of Texas at Brownsville— Brownsville, TX	0	12	0
02 May 05	02 May 05	Maine School Administrative District 55— Hiram, ME	0	1500	0
02 May 05	02 May 05	Poinciana Elementary School— Boynton Beach, FL	0	32	0
03 May 05	03 May 05	Parkview Elementary School—Van Buren, AR	0	100	0
03 May 05	03 May 05	Ruth Powel Elementary School—Safford, AZ	0	243	0
03 May 05	03 May 05	Sir Francis Drake Hotel—San Francisco, CA	0	51	0
03 May 05	03 May 05	University of Wisconsin-Green Bay— Green Bay, WI	0	24	0
04 May 05	04 May 05	Buena High School—Sierra Vista, AZ	0	28	0
04 May 05	04 May 05	Columbus Elementary School—Edwardsville, IL	0	158	0
04 May 05	04 May 05	Huachuca Oaks Science Camp—Hereford, AZ	0	45	0
04 May 05	06 May 05	Chugiak High School—Eagle River, AK	0	100	0
05 May 05	05 May 05	Baldwin Consolidated School—West Baldwin, ME	0	47	0
05 May 05	05 May 05	Delmarva Star Gazers—Dover, DE	0	30	0
05 May 05	05 May 05	Kansas City Science City, Union Station Museum—Kansas City, MO	0	300	0
05 May 05	05 May 05	Maine School Administrative District 55— Hiram, ME	0	25	0
06 May 05	06 May 05	Mary Collins Charter School—Petaluma, CA	0	50	0
06 May 05	06 May 05	Middle Tennessee State University— Murfreesboro, TN	0	30	0
06 May 05	06 May 05	Renberg Elementary School—Sioux Falls, SD	0	12	0
06 May 05	06 May 05	Roswell Independent School District— Roswell, NM	0	4	0
06 May 05	06 May 05	Theodore Roosevelt Elementary School— Manhattan, KS	0	116	0
07 May 05	07 May 05	Dartmouth College—Hanover, NH	0	12	0
07 May 05	07 May 05	Fremont Peak Observatory Association— San Juan Bautista, CA	0	30	0
07 May 05	07 May 05	This is True, Inc.—Boulder, CO	0	20	0
09 May 05	09 May 05	Manville Alexander Batcho Intermediate School— Manville, NJ	0	25	0
09 May 05	30 May 05	Tulsa Central Public Library—Tulsa, OK	0	500	0
10 May 05	10 May 05	Lewis Center for Educational Research— Apple Valley, CA	0	25	0
11 May 05	11 May 05	Monarch Academy—Oakland, CA	0	75	0
11 May 05	11 May 05	Penn Mont Academy—Hollidaysburg, PA	0	22	0
12 May 05	12 May 05	Morris Museum—Morristown, NJ	0	38	0
12 May 05	12 May 05	North Eugene High School—Cheshire, OR	0	13	0
12 May 05	12 May 05	Reno High School—Reno, NV	0	16	0
12 May 05	12 May 05	Sunset Elementary School—Sturgeon Bay, WI	0	218	0
13 May 05	13 May 05	Anne Sullivan School—Sioux Falls, SD	0	50	0
13 May 05	13 May 05	E.O. Lawrence School—Canton, SD	0	86	0
13 May 05	13 May 05	Hannah Caldwell Elementary School—Union, NJ	0	95	0
13 May 05	13 May 05	Huachuca Astronomy Club—Hereford, AZ	0	30	0

13 May 05	13 May 05	Rising Sun Maryland Library—Rising Sun, MD	0	30	0
13 May 05	13 May 05	San Antonio Astronomical Association— San Antonio, TX	0	40	0
13 May 05	13 May 05	St. Paul School Astronomy—Park Ridge, IL	0	25	0
13 May 05	13 May 05	Woodruff School—Berkeley Heights, NJ	0	60	0
14 May 05	14 May 05	Floral Street School—Shrewsbury, MA	0	50	0
14 May 05	14 May 05	Fremont Peak Observatory Association— San Juan Bautista, CA	0	35	0
14 May 05	14 May 05	Greenway School—Bisbee, AZ	0	24	0
14 May 05	14 May 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	50	0
14 May 05	14 May 05	University of Wisconsin, Eau Claire— Eau Claire, WI	0	100	0
14 May 05	14 May 05	Von Braun Astronomical Society—Huntsville, AL	0	22	0
15 May 05	15 May 05	USS Avenger—East Brunswick, NJ	0	11	0
16 May 05	16 May 05	Coosa Valley Christian School—Birmingham, AL	0	42	0
17 May 05	17 May 05	Death Valley National Park—Death Valley, CA	0	50	0
17 May 05	17 May 05	Huachuca Astronomy Club—Hereford, AZ	0	70	0
18 May 05	18 May 05	North Eugene High School—Cheshire, OR	0	6	0
18 May 05	18 May 05	Rockford Amateur Astronomers—Rockford, IL	0	18	0
19 May 05	19 May 05	Riverside Unified School District—Riverside, CA	0	300	0
20 May 05	20 May 05	Huachuca Astronomy Club—Hereford, AZ	0	25	0
20 May 05	20 May 05	National Space Science and Technology Institute—Colorado Springs, CO	0	28	0
20 May 05	20 May 05	Ridgewood High School—Norridge, IL	0	40	0
20 May 05	20 May 05	San Diego Astronomy Association— San Diego, CA	0	24	0
20 May 05	20 May 05	San Diego Astronomy Association— San Diego, CA	0	25	0
21 May 05	21 May 05	Holiday Inn Rapid City—Rapid City, SD	0	18	0
21 May 05	21 May 05	Maryland Science Center—Baltimore, MD	0	300	0
21 May 05	21 May 05	This is True, Inc.—Boulder, CO	0	15	0
23 May 05	23 May 05	Girl Scout Troop 668—Harmony, NC	0	17	0
25 May 05	25 May 05	American Association of Museums— Washington, DC	0	45	0
25 May 05	25 May 05	Final Frontier Astronomy Society—Hoover, AL	0	8	0
25 May 05	25 May 05	Iolani School—Honolulu, HI	0	34	0
25 May 05	25 May 05	Shawnee Elementary School— Macomb Township, MI	0	45	0
25 May 05	25 May 05	Shawnee Elementary School— Macomb Township, MI	0	60	0
26 May 05	26 May 05	Crowell Elementary School—Turlock, CA	0	124	0
26 May 05	26 May 05	The Dalles Middle School—The Dalles, OR	0	196	0
27 May 05	27 May 05	Amateur Astronomers, Inc.—Cranford, NJ	0	40	0
27 May 05	27 May 05	Dufur School—Dufur, OR	0	33	0
27 May 05	27 May 05	Hawthorne Elementary School—Everett, WA	0	45	0
27 May 05	27 May 05	Hilo Intermediate School—Hilo, HI	0	70	0
27 May 05	27 May 05	Stellafane Convention—Springfield, VT	0	14	0
28 May 05	28 May 05	This is True, Inc.—Boulder, CO	0	20	0
01 Jun 05	30 Jun 05	Franklin Elementary School—Burlingame, CA	0	50	0
02 Jun 05	02 Jun 05	Chugiak High School—Eagle River, AK	0	30	0
02 Jun 05	02 Jun 05	St. Elizabeth School—Parsippany, NJ	0	112	0
03 Jun 05	03 Jun 05	Tucson Amateur Astronomy Association— Tucson, AZ	0	80	0
04 Jun 05	04 Jun 05	Red River Astronomy Club—Murfreesboro, AR	0	90	0
04 Jun 05	04 Jun 05	Robert A. Church Elementary School— Memphis, TN	0	40	0
04 Jun 05	04 Jun 05	This is True, Inc.—Boulder, CO	0	8	0
05 Jun 05	05 Jun 05	New Jersey Astronomical Association (NJAA)— High Bridge, NJ	0	12	0
05 Jun 05	05 Jun 05	New Jersey Astronomical Association (NJAA)— High Bridge, NJ	0	15	0
07 Jun 05	07 Jun 05	Final Frontier Astronomy Society—Hoover, AL	0	3	0
07 Jun 05	07 Jun 05	Jhamandas Watumull Planetarium—Honolulu, HI	0	25	0
08 Jun 05	08 Jun 05	North Eugene High School—Cheshire, OR	0	1150	0
09 Jun 05	09 Jun 05	Hannah Caldwell Elementary School—Union, NJ	0	85	0
10 Jun 05	10 Jun 05	Middle Tennessee State University— Murfreesboro, TN	0	21	0

10 Jun 05	10 Jun 05	Stellafane Convention—Springfield, VT	0	16	0
10 Jun 05	10 Jun 05	Young Men's Club—Charlottesville, VA	0	20	0
11 Jun 05	11 Jun 05	Clarkston Community Band—Clarkston, MI	0	400	0
11 Jun 05	11 Jun 05	Harding County School—Buffalo, SD	0	88	0
11 Jun 05	11 Jun 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	60	0
11 Jun 05	11 Jun 05	Wesleyan University—Middletown, CT	0	120	0
11 Jun 05	12 Jun 05	Clarkston Community Band—Clarkston, MI	0	175	0
14 Jun 05	14 Jun 05	Hilton Cincinnati—Cincinnati, OH	0	20	0
15 Jun 05	15 Jun 05	High Bridge Elementary School—High Bridge, NY	0	50	0
16 Jun 05	16 Jun 05	"Science News"—Washington, DC	0	7	0
16 Jun 05	16 Jun 05	Flint River Astronomy Club—Fayetteville, GA	0	10	0
16 Jun 05	16 Jun 05	North Eugene High School—Cheshire, OR	0	3	0
16 Jun 05	16 Jun 05	Valencia Park Elementary School— San Diego, CA	0	17	0
17 Jun 05	17 Jun 05	Delaware Valley Amateur Astronomers— Plymouth Meeting, PA	0	50	0
17 Jun 05	17 Jun 05	Southeastern Planetarium Association— Atlanta, GA	0	75	0
18 Jun 05	18 Jun 05	Discovery Park—Safford, AZ	0	27	0
18 Jun 05	18 Jun 05	Logan Middle School—La Crosse, WI	0	75	0
18 Jun 05	18 Jun 05	Orange County HomeGrown—Orleans, IN	0	75	0
20 Jun 05	20 Jun 05	Plum Point Middle School—Huntingtown, MD	0	170	0
20 Jun 05	20 Jun 05	University of Arkansas at Jonesboro— Nashville, AR	0	24	0
22 Jun 05	22 Jun 05	New Mexico Museum of Space History— Alamogordo, NM	0	13	0
24 Jun 05	24 Jun 05	Hilo Intermediate School—Hilo, HI	0	70	0
24 Jun 05	24 Jun 05	Logan Middle School—La Crosse, WI	0	65	0
24 Jun 05	24 Jun 05	North Houston Astronomy Club—Kingwood, TX	0	73	0
24 Jun 05	24 Jun 05	San Diego Astronomy Association— San Diego, CA	0	14	0
24 Jun 05	24 Jun 05	San Diego Astronomy Association— San Diego, CA	0	15	0
24 Jun 05	24 Jun 05	San Diego Astronomy Association— San Diego, CA	0	16	0
24 Jun 05	24 Jun 05	Tacoma Astronomical Society—Tacoma, WA	0	12	0
24 Jun 05	24 Jun 05	University of Texas at Brownsville— Brownsville, TX	0	54	0
25 Jun 05	25 Jun 05	Dallas Library System, Skyline Branch— East Dallas, TX	0	18	0
25 Jun 05	25 Jun 05	Georgia Southern University—Statesboro, GA	0	2	0
25 Jun 05	25 Jun 05	Logan Middle School—La Crosse, WI	0	115	0
25 Jun 05	25 Jun 05	North Houston Astronomy Club—Kingwood, TX	0	66	0
25 Jun 05	25 Jun 05	Wesleyan University—Middletown, CT	0	12	0
26 Jun 05	26 Jun 05	Camp Quality USA—Blairstown, NJ	0	75	0
27 Jun 05	27 Jun 05	Middle Tennessee State University— Murfreesboro, TN	0	16	0
27 Jun 05	27 Jun 05	Phillipston Memorial School Group Meeting— Phillipston, MA	0	65	0
28 Jun 05	28 Jun 05	College for Kids—Cranford, NJ	0	14	0
28 Jun 05	28 Jun 05	College for Kids—Cranford, NJ	0	15	0
28 Jun 05	28 Jun 05	Middle Tennessee State University— Murfreesboro, TN	0	21	0
28 Jun 05	28 Jun 05	Portland State University—Portland, OR	0	34	0
28 Jun 05	29 Jun 05	Camp Cavell—Lexington, MI	0	40	0
29 Jun 05	29 Jun 05	College for Kids—Cranford, NJ	0	14	0
29 Jun 05	29 Jun 05	College for Kids—Cranford, NJ	0	15	0
29 Jun 05	29 Jun 05	DuPage Regional Office of Education— Bensenville, IL	0	28	0
29 Jun 05	29 Jun 05	Middle Tennessee State University— Murfreesboro, TN	0	20	0
01 Jul 05	01 Jul 05	Scobee Planetarium—San Antonio, TX	0	20	0
02 Jul 05	02 Jul 05	Richland Astronomical Society—Mansfield, OH	0	7	0
03 Jul 05	03 Jul 05	Eastbay Astronomical Society—Oakland, CA	0	10	0
03 Jul 05	03 Jul 05	North Eugene High School—Cheshire, OR	0	8	0
03 Jul 05	03 Jul 05	Red River Astronomy Club—Murfreesboro, AR	0	30	0

03 Jul 05	03 Jul 05	San Diego Astronomy Association— San Diego, CA	0	120	0
07 Jul 05	07 Jul 05	Discovery Center of Springfield—Springfield, MO	0	35	0
07 Jul 05	07 Jul 05	KCTS-TV, Channel 9/Seattle—Seattle, WA	0	45	0
08 Jul 05	08 Jul 05	Colorado Springs Astronomical Society— Pikes Peak National Forest, CO	0	15	0
08 Jul 05	08 Jul 05	Miami Valley Astronomical Society—Dayton, OH	0	25	0
09 Jul 05	09 Jul 05	Cincinnati Astronomical Society—Cincinnati, OH	0	40	0
09 Jul 05	09 Jul 05	Discovery Center of Springfield—Springfield, MO	0	120	0
09 Jul 05	09 Jul 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	75	0
12 Jul 05	12 Jul 05	Art Institute of San Diego—San Diego, CA	0	39	0
12 Jul 05	12 Jul 05	Community Academy for Lifelong Learning— State College, PA	0	11	0
12 Jul 05	12 Jul 05	Rochester Public Library—Rochester, NH	0	70	0
12 Jul 05	12 Jul 05	Wee Care Daycare—Wooster, OH	0	17	0
13 Jul 05	13 Jul 05	Bosse High School—Evansville, IN	0	28	0
13 Jul 05	13 Jul 05	Calico Kids—Keighley, KS	0	16	0
13 Jul 05	13 Jul 05	Discovery Center of Springfield—Springfield, MO	0	16	0
13 Jul 05	13 Jul 05	Greater Portland Astronomical Society— Westbrook, ME	0	10	0
13 Jul 05	13 Jul 05	North Eugene High School—Cheshire, OR	0	1	0
14 Jul 05	14 Jul 05	Flint River Astronomy Club—Fayetteville, GA	0	9	0
15 Jul 05	15 Jul 05	Lake Afton Public Observatory—Goddard, KS	0	8	0
15 Jul 05	15 Jul 05	Naples Public Library—Naples, ME	0	60	0
15 Jul 05	15 Jul 05	Oklahoma Department of Wildlife— Selman Living Laboratory Observatory, OK	0	50	0
15 Jul 05	15 Jul 05	Sunshine Kids Camp—Sykesville, MD	0	300	0
16 Jul 05	16 Jul 05	Barstow Gymnastic Center—Barstow, CA	0	82	0
16 Jul 05	16 Jul 05	Crystal Creek Campground—Columbiaville, MI	0	20	0
16 Jul 05	16 Jul 05	Griffith Observatory and Planetarium— Los Angeles, CA	0	115	0
18 Jul 05	18 Jul 05	Encompass Child Care—Green Bay, WI	0	26	0
19 Jul 05	19 Jul 05	Alliance of the Arts—Fort Myers, FL	0	300	0
19 Jul 05	19 Jul 05	Art Institute of San Diego—San Diego, CA	0	30	0
20 Jul 05	20 Jul 05	New Mexico Museum of Space History— Alamogordo, NM	0	21	0
21 Jul 05	21 Jul 05	Windham Public Library—Windham, ME	0	3	0
23 Jul 05	23 Jul 05	Harding County School—Buffalo, SD	0	67	0
23 Jul 05	23 Jul 05	Washington State University—Curlew, WA	0	47	0
24 Jul 05	24 Jul 05	Women's Group—Concord, CA	0	20	0
26 Jul 05	26 Jul 05	Art Institute of San Diego—San Diego, CA	0	29	0
26 Jul 05	26 Jul 05	Higher Achievement Program, Inc.— Charlottesville, VA	0	35	0
27 Jul 05	27 Jul 05	New Mexico Museum of Space History— Alamogordo, NM	0	42	0
28 Jul 05	28 Jul 05	Community Academy for Lifelong Learning— State College, PA	0	13	0
28 Jul 05	28 Jul 05	Village of Freeport—Freeport, NY	0	25	0
30 Jul 05	30 Jul 05	Eastbay Astronomical Society—Oakland, CA	0	15	0
30 Jul 05	30 Jul 05	Oklahoma Department of Wildlife— Selman Living Laboratory Observatory, OK	0	35	0
30 Jul 05	30 Jul 05	Prospect Library public talk—Prospect, NY	0	30	0
30 Jul 05	30 Jul 05	Robert A. Church Elementary School— Memphis, TN	0	175	0
01 Aug 05	01 Aug 05	North Coast Teachers Touching the Sky— Bend, OR	0	12	0
02 Aug 05	02 Aug 05	Art Institute of San Diego—San Diego, CA	0	33	0
02 Aug 05	02 Aug 05	Community Academy for Lifelong Learning— State College, PA	0	12	0
02 Aug 05	02 Aug 05	National Night Out booth—Oak Harbor, WA	0	80	0
02 Aug 05	02 Aug 05	South Burlington Police Department— South Burlington, VT	0	30	0
04 Aug 05	04 Aug 05	KCTS-TV, Channel 9/Seattle—Seattle, WA	0	22	0
05 Aug 05	05 Aug 05	Logan Middle School—La Crosse, WI	0	86	0
06 Aug 05	06 Aug 05	American Electric Power—Columbus, OH	0	60	0
06 Aug 05	06 Aug 05	Camp Fire USA—Veneta, OR	0	52	0

06 Aug 05	06 Aug 05	Hampshire County Federation Women's Institute— Bristol, NH	0	16	0
06 Aug 05	06 Aug 05	Kamehameha High School, East Hawai'i— Kea'au, HI	0	14	0
06 Aug 05	06 Aug 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	4	0
06 Aug 05	07 Aug 05	Oklahoma City Astronomy Club—Jones, OK	0	10	0
09 Aug 05	09 Aug 05	Art Institute of San Diego—San Diego, CA	0	33	0
09 Aug 05	09 Aug 05	Shawswick Farm Bureau—Bedford, IN	0	13	0
10 Aug 05	10 Aug 05	Na Kalai Wa'a Moku o Hawai'i—Kawaihae, HI	0	86	0
12 Aug 05	12 Aug 05	Cerro Tololo Inter-American Observatory— La Serena, Chile	0	100	0
12 Aug 05	12 Aug 05	Chattanooga Zoo at Warner Park— Chattanooga, TN	0	150	0
12 Aug 05	12 Aug 05	Pierce County Library—Tacoma, WA	0	14	0
12 Aug 05	12 Aug 05	Southwest Florida Astronomical Society, Inc.— Fort Myers, FL	0	14	0
13 Aug 05	13 Aug 05	Griffith Observatory and Planetarium— Los Angeles, CA	0	82	0
13 Aug 05	13 Aug 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	85	0
13 Aug 05	13 Aug 05	Whatcom County Parks—Ferndale, WA	0	133	0
14 Aug 05	14 Aug 05	First United Methodist Church—Huntsville, AL	0	15	0
16 Aug 05	16 Aug 05	Hilo Intermediate School—Hilo, HI	0	80	0
16 Aug 05	16 Aug 05	Kamehameha Middle School, East Hawai'i— Kea'au, HI	0	17	0
17 Aug 05	17 Aug 05	Challenger Learning Center of San Antonio— San Antonio, TX	0	23	0
18 Aug 05	18 Aug 05	Cumberland Astronomical Society—Gallatin, TN	0	16	0
19 Aug 05	19 Aug 05	Evansville Astronomical Society—Evansville, IN	0	30	0
19 Aug 05	19 Aug 05	Home audience	0	200	0
20 Aug 05	20 Aug 05	Cachuma Lake Campground—Santa Barbara, CA	0	175	0
20 Aug 05	20 Aug 05	South Florida Science Museum— West Palm Beach, FL	0	9	0
24 Aug 05	24 Aug 05	Kitsap County Fair 2005—Bremerton, WA	0	452	0
25 Aug 05	25 Aug 05	Kitsap County Fair 2005—Bremerton, WA	0	415	0
26 Aug 05	26 Aug 05	Brazosport Astronomy Club—Liverpool, TX	0	20	0
26 Aug 05	26 Aug 05	Kitsap County Fair 2005—Bremerton, WA	0	380	0
26 Aug 05	26 Aug 05	Maine Space Grant Consortium—Augusta, ME	0	2	0
26 Aug 05	26 Aug 05	St. Petersburg Astronomy Club— St. Petersburg, FL	0	55	0
27 Aug 05	27 Aug 05	Chaplin Nature Center—Arkansas City, KS	0	35	0
27 Aug 05	27 Aug 05	Kitsap County Fair 2005—Bremerton, WA	0	561	0
27 Aug 05	27 Aug 05	Lopez Lake Campground—Arroyo Grande, CA	0	210	0
27 Aug 05	27 Aug 05	Shakamak State Park—Jasonville, IN	0	30	0
28 Aug 05	28 Aug 05	Kitsap County Fair 2005—Bremerton, WA	0	351	0
31 Aug 05	31 Aug 05	Eastbay Astronomical Society—Oakland, CA	0	500	0

A366. Navigator: Museum Exhibits and Alliances

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Navigator E/PO is supporting the Space Science Institute's development of a traveling exhibition on the search for cosmic origins. The interactive exhibit will be organized around three interrelated areas: "Star Birth," "PlanetQuest," and "Search for Life: Are We Alone?" Navigator E/PO also developed a permanent PlanetQuest kiosk at the Keck Visitors Center at Mauna Kea, allowing visitors to take a "virtual tour" of the Keck Interferometer (the center receives about 100,000 visitors per year).

Lead: Mr. Randal Jackson, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Randal.K.Jackson@jpl.nasa.gov. Phone: 818-393-5925.

Scientist(s):	Mr. Dan Goods	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Randal Jackson	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	31 Dec 04	Santa Monica Place—Santa Monica, CA	0	12000000	0
01 Oct 04	30 Sep 05	Lawrence Berkeley National Laboratory— Berkeley, CA	0	250000	0
01 Oct 04	30 Sep 05	W.M. Keck Observatory—Kamuela, HI	0	100000	0
01 Jan 05	31 Mar 05	Lawrence Berkeley National Laboratory— Berkeley, CA	0	250000	0

12 Feb 05	12 Feb 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	50	0
29 Mar 05	29 Mar 05	Huntington Library and Gardens— San Marino, CA	0	300	0
01 Apr 05	30 Jun 05	Space Telescope Science Institute— Baltimore, MD	0	37700000	0
03 Jun 05	05 Aug 05	Fort Collins Museum of Contemporary Art— Fort Collins, CO	0	2181	0

A367. Observatory and Planetarium Theater Project

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: Science Center Development[B31]

Description: The Observatory and Planetarium Theater Project will expand the South Carolina State Museum by adding an astronomical observatory, digital planetarium, and large-format theater. These additions will establish the State Museum as South Carolina's first major center for informal science education. Funding from the NASA Science Mission Directorate is being used to equip the planetarium with multimedia projection technology, projection dome, sound and lighting systems, Omniscan laser imaging system, and assistive learning systems for vision- and hearing-impaired visitors. In 2005, the State Museum engaged in a variety of space science programs using NASA education resources. These activities support the museum's overall objective of contributing to the public's understanding of science, mathematics, and technology. Also in 2005, planning continued for the planetarium and its support facilities with an anticipated opening in 2006.

Lead: Mr. William Calloway, South Carolina State Museum, Columbia, SC 29201.

E-mail: callow@museum.state.sc.us. Phone: 803-898-4930.Primary URL: <http://www.museum.state.sc.us>**A368. Public Outreach and Education with Meteorites Involving a Museum Exhibit**

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: This effort involves the creation of a museum display about meteorites and the origin of the solar system accompanied by teacher workshops and lectures/demonstrations. The objective of this activity was to create a display at the Rice Museum of Rocks and Minerals, which is visited by several K-12 classes each week. Workshops on activities associated with the display, as well as lectures/demonstrations at conferences attended by K-12 teachers, were part of this activity.

Lead: Dr. Alex Ruzicka, Portland State University, Portland, OR 97207. E-mail: ruzicka@pdx.edu. Phone: 503-725-3372.Contact: Dr. Melinda Hutson, Portland State University, Portland, OR 97207. E-mail: hutsonm@pdx.edu. Phone: 503-725-3372.Scientist(s): Dr. Melinda Hutson Portland State University Portland, OR
Dr. Alex Ruzicka Portland State University Portland, ORPartner(s): Portland Public Schools Portland, OR
Rice Northwest Museum of Rocks and Minerals Hillsboro, OR

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Oct 04	08 Oct 04	Oregon Science Teachers Association— Salem, OR	0	10	0
01 Apr 05	01 Apr 05	Intel Northwest Science Expo—Portland, OR	0	680	0

A369. Searching for Life in an Antarctic Lake Without Leaving Chicago

Theme(s): Planetary

Msn/Prgm: SRT[B28]

Description: We will conduct a live Internet videoconference between scientists in Antarctica and visitors at the Adler Planetarium, Chicago, during a Far Out Friday event at the Adler. This distance-learning event targets members of the general public and will leverage the Adler's existing videoconferencing equipment and studios, as well as its current outreach relationships with community centers. The event will be held as part of the Adler's ongoing Far Out Friday series. During Far Out Friday, the Adler has extended hours and hosts speakers, special programs, and activities for visitors of all ages. This Far Out Friday event will be centered on Antarctica and the search for alien life. Dr. Doran will host the event at the Adler and give an introduction of the project to the audience. The highlight will be the opportunity for the public to speak (via Internet videoconference) to Doran's colleagues and students in Antarctica for approximately 30 minutes. The event will end with a followup question-and-answer session between Doran and the audience.

Lead: Dr. Peter Doran, University of Illinois at Chicago, Chicago, IL 60607. E-mail: pdoran@uic.edu. Phone: 312-413-7275.Contact: Dr. Michael Smutko, Adler Planetarium and Astronomy Museum, Chicago, IL 60605.
E-mail: msmutko@adlerplanetarium.org. Phone: 312-322-0318.Primary URL: <http://www.adlerplanetarium.org/visitors-guide/new.shtml#fof>**A370. "Secrets of Saturn" Sky Show**

Theme(s): Planetary

Msn/Prgm: Adler Center for Space Science Education[B29], Cassini-Huygens Probe[B94]
 Description: This sky show, originally entitled "Ring World," included background on the Cassini spacecraft and the latest news updates from the exploration mission. "Secrets of Saturn" was updated with each new discovery as soon as the information became available.
 Lead: Dr. Paul Knappenberger, Adler Planetarium and Astronomy Museum, Chicago, IL 60605.
 E-mail: paul@adlernet.org. Phone: 312-322-0325.
 Primary URL: <http://www.adlerplanetarium.org>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Adler Planetarium and Astronomy Museum— Chicago, IL	0	32155	0

A371. Solar Dynamics Observatory (SDO): Education Initiatives for Museums, Planetariums, and Science Centers

Theme(s): Heliophysics
 Msn/Prgm: SDO[B91]
 Description: Since the Solar Dynamics Observatory (SDO) mission involves the study of the Sun and solar activity, the majority of the exhibits and activities will include topics suited to understanding our closest star: the Sun. Using such public venues enables SDO to reach students visiting not only from educational institutions, but also from various community groups and organizations such as the Scouts, astronomy clubs, and homeschool networks.
 Lead: Ms. Emilie Drobnes, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: Emilie@ihy.gsfc.nasa.gov. Phone: 301-286-3146.
 Contact: Ms. Barbara Lambert, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: blambert@hst.nasa.gov. Phone: 301-286-1275.
 Primary URL: <http://sdo.gsfc.nasa.gov>
 Secondary URL: <http://www.theccm.org/>
 Scientist(s): Ms. Liz Citrin NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Emilie Drobnes NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Therese Kucera NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Barbara Lambert NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Shannon Lee Chabot Community College Hayward, CA
 Ms. Carol Lilly NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Mike Lilly NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Robert Lilly NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Ray Mitchell Stanford University Stanford, CA
 Mr. Jim Perry NASA Goddard Space Flight Center Greenbelt, MD
 Dr. W. Dean Pesnell NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Deborah Scherrer Stanford University Stanford, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
19 Mar 05	20 Mar 05	Chesapeake Children's Museum— Annapolis, MD	123	0	0
20 Mar 05	20 Mar 05	Chabot Space and Science Center— Oakland, CA	0	780	0
30 Apr 05	01 May 05	Chesapeake Children's Museum— Annapolis, MD	77	0	0
04 Jun 05	04 Jun 05	Chesapeake Children's Museum— Annapolis, MD	1065	0	0

A372. Solar System Impacts: A Suite of Computer-Generated Visualizations

Theme(s): Planetary
 Msn/Prgm: SRT[B28]
 Description: Impacts, large and small, are one of the primary processes shaping the formation and evolution of the solar system. There has been a phenomenal increase in the ability of individual researchers to simulate impacts using desktop computers, but only a few have offered the results of their simulations in animated form. Public interest in impact events is high, but the level of understanding is relatively low. The goal of the project is to create engaging and scientifically accurate animations and images of impact processes in the solar system specifically designed to dispel commonly held misconceptions and improve general understanding among a broad lay audience. The Harvard Museum of Natural History (HMNH) will be the primary forum for evaluation and distribution of the proposed E/PO products.
 Lead: Dr. Sarah Stewart-Mukhopadhyay, Harvard University, Cambridge, MA 02138.
 E-mail: sstewart@eps.harvard.edu. Phone: 617-496-6462.
 Primary URL: <http://www.fas.harvard.edu/~planets/sstewart/>
 Partner(s): Harvard-Smithsonian Center for Astrophysics Cambridge, MA

A373. Solar System Radio Explorer Kiosk

Theme(s): Heliophysics, Planetary

Msn/Prgm: SRT[B28]

Description: The Solar System Radio Explorer Kiosk (SSREK) teaches visitors about radio waves from Jupiter and the Sun and what they may be telling us about these celestial bodies. The SSREK shows that the senses of hearing and touch are viable ways to learn about these emissions. Through the innovative rendering of radio astronomy data, the SSREK imparts to the public the excitement of scientific discovery and inspire and motivate a new generation to pursue careers in science, technology, engineering, and mathematics, especially students who are currently underrepresented in these fields. We are building an interactive kiosk designed to be wheelchair-accessible. We teach visitors to identify radio emissions from Jupiter and the Sun after hearing samples of each. Since these scientific data will be conveyed as sounds, visitors can recognize that they are capable of identifying Jupiter or the Sun using only hearing. The SSREK allows visitors to learn more about what these bursts tell scientists about conditions at Jupiter or the Sun. Visitors are also directed to the SSREK Web site for more information. This site also serves as an archive of the software and detailed plans of the project, enabling other institutions to replicate their own SSREK. We have established partnerships with the Maryland Science Center and the National Federation of the Blind. They assist in the design, development, testing, execution, and dissemination of this project. Goals of the SSREK are as follows: (1) to have visitors share in the excitement of space science discoveries and learn about the radio waves from Jupiter and the Sun and what they may be telling us about these worlds, (2) to have students recognize that a career in science is an option even though they may have a visual or other impairment and to have them understand that there are other ways to study the universe besides visually, and (3) to promote and expand this project to other sites.

Contact: Dr. Leonard Garcia, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: Leonard.Garcia@gsfc.nasa.gov. Phone: 301-286-9486.Primary URL: <http://radiojove.gsfc.nasa.gov/ssrek/>

Secondary

URL: <http://radiojove.gsfc.nasa.gov/>

Scientist(s):	Mr. Jay Friedlander	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Leonard Garcia	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Chuck Higgins	Middle Tennessee State University	Murfreesboro, TN
	Dr. William Taylor	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. James Thieman	NASA Goddard Space Flight Center	Greenbelt, MD

Partner(s): Maryland Science Center
National Federation of the Blind

Baltimore, MD
Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
29 Oct 04	29 Oct 04	National Federation of the Blind— Baltimore, MD	3	0	0
06 Apr 05	09 Apr 05	Council for Exceptional Children Convention & Expo—Baltimore, MD	30	100	0
24 Jul 05	28 Jul 05	Exceptional Space Science Materials for Exceptional Students—Huntsville, AL	0	10	0

A374. Space Weather and Its Effects on Earth and Jupiter

Theme(s): Heliophysics, Planetary

Msn/Prgm: SRT[B28]

Description: We provide teacher workshops on space weather that are designed to give middle school teachers inquiry- and standards-based materials and activities that focus on the Sun and space weather. Topics include the anatomy of the Sun, ways of viewing and tracking the Sun, Earth upper atmosphere chemistry, magnetic fields, solar wind, effects of the Sun on Earth and its climate, and space weather phenomena (auroras, etc.). The workshop combines hands-on activities, lectures, and field trips to provide teachers with a content-rich program. This summer, we gave the workshop for the second time to 13 teachers. We are in the process of developing a teachers' workshop guidebook for this workshop.

Contact: Dr. Emily Cobabe-Ammann, University of Colorado, Boulder, CO 80309.

E-mail: ecobabe@lasp.colorado.edu. Phone: 303-735-5814.**A375. Telescience in Museums: Linking Learners to a Life-Seeking Desert Rover**

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SRT[B28]

Description: Carnegie Mellon University will bring its Life in the Atacama, Detection of Scarce Microbes in Extreme Environments, and Science on the Fly projects into science museums, providing the public with a compelling way to learn about life sciences and robotics. Informal experiences will show how life adapts to its environment and how scientists use robots to explore faraway places. With tools developed by the EventScope project for the Mars Exploration Rover mission, we will construct virtual environments that depict the Atacama Desert of Chile, one of the world's most realistic Mars analogues. Displays will reside at the Carnegie Museum of Natural History and the Adler Planetarium and Science Museum in Chicago. The software and experiences will be available to other museums online.

Lead: Dr. William Whittaker, Carnegie Mellon University, Pittsburgh, PA 15213. E-mail: coppin@cmu.edu.
Phone: 412-268-1565.

Primary URL: <http://www.eventscope.org>

Secondary

URL: <http://www.eventscope.org/atacama>

Scientist(s): Dr. Natalie Cabrol Search for Extraterrestrial Intelligence (SETI) Institute

Mr. Peter Coppin Carnegie Mellon University Mountain View, CA
 Dr. Mark Subarro Adler Planetarium and Astronomy Museum Pittsburgh, PA
 Dr. Alan Waggoner Carnegie Mellon University Chicago, IL
 Mr. Michael Wagner Carnegie Mellon University Pittsburgh, PA
 Dr. David Wettergreen Carnegie Mellon University Pittsburgh, PA

Partner(s): Adler Planetarium and Astronomy Museum Chicago, IL
 Carnegie Museum of Natural History Pittsburgh, PA
 Search for Extraterrestrial Intelligence (SETI) Institute Mountain View, CA
 University of Arizona Tucson, AZ
 University of Tennessee Knoxville, TN

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
10 Oct 04	12 Oct 04	Infovis 2004—Austin, TX	0	100	0
14 Mar 05	18 Mar 05	36th Lunar and Planetary Science Conference—League City, TX	100	0	0
17 Sep 05	17 Sep 05	Adler Planetarium and Astronomy Museum—Chicago, IL	0	55	0
21 Sep 05	23 Sep 05	Adler Planetarium and Astronomy Museum—Chicago, IL	10	70	0

A376. "The Aliens Answer!" A Full-Dome Exobiology Theater Show

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: The purpose of this project was to create a full-dome planetarium show that examines the limits of life on Earth and the types of planets elsewhere in the universe that might harbor life. The original title was The Aliens Answer." This was later changed to "Fantasy Worlds-Exploring the Limits of Life." The target audience was the lay public and schoolchildren in grades 5–8. A Spanish-language version of the show was created to allow Spanish-speaking audiences to view the show. In addition to museum showings, the show was also brought to Cuatreciénegas, Mexico, in a traveling planetarium.

Contact: Dr. George Fox, University of Houston, Houston, TX 77002. E-mail: fox@uh.edu. Phone: 713-743-8363.

Primary URL: http://www.hmns.org/see_do/planetarium.asp

Secondary

URL: <http://www.hmns.org/files/marketing/FantasyWorlds.pdf>

Scientist(s): Dr. George Fox University of Houston Houston, TX

Partner(s): Houston Museum of Natural Science Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Houston Museum of Natural Science—Houston, TX	0	12358	0

A377. "What Are Astronomers Doing?" An Internet and Interactive Museum Kiosk for Educational Outreach

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: Using the Internet and a museum kiosk at McDonald Observatory's new visitors center, the What Are Astronomers Doing? project is making the general public, K–12 teachers, and students aware of NASA-sponsored research. "What Are Astronomers Doing?" is a Web site located at the listed URL. This Web site is updated weekly to reflect the bios and the research of astronomers who are working on the telescopes at McDonald Observatory that week. A "NASA-sponsored Astronomer of the Week" is also included. A museum kiosk, containing updatable software that runs the same content as the Web site, is installed in the McDonald Observatory Visitors Center. The kiosk is located within the "Decoding Starlight" exhibit in the 2, 500-square-foot exhibit hall. Each year, more than 100, 000 people visit the Observatory. Last year, 250, 000 people visited the What Are Astronomers Doing? Web site. The objectives are to (a) expand the "What Are Astronomers Doing?" Web site/kiosk to create a template for the "NASA-sponsored Astronomer of the Week" and convey content weekly regarding the science objectives, practices, processes, and results of the parent proposal of the PI, the Co-Investigator, and other University of Texas astronomers conducting NASA-sponsored research; (b) maintain, update, enrich, and expand the "What Are Astronomers Doing?" and NASA-sponsored research content uploaded to the Internet and kiosk over years 2 and 3; and (c) perform evaluation and report the results. This Web site and kiosk are unique because they explain what astronomers ARE doing, not what they have done in the past. The Web site is timely and updated each week. The NASA-sponsored Astronomer of the Week includes the research of an astronomer who might not show up on the site otherwise. For example, this allows us to include an astronomer who may be using only space telescopes.

Lead:	Dr. David Lambert, University of Texas at Austin, Austin, TX 78712. E-mail: dll@astro.as.utexas.edu . Phone: 512-471-3000.		
Contact:	Ms. Sandra Preston, University of Texas at Austin, Austin, TX 78712. E-mail: sandi@astro.as.utexas.edu . Phone: 512-475-6765.		
Primary URL:	http://mcdonaldobservatory.org/research		
Scientist(s):	Dr. George Benedict	University of Texas at Austin	Austin, TX
	Dr. Anita Cochran	University of Texas at Austin	Austin, TX
	Dr. William Cochran	McDonald Observatory	Austin, TX
	Dr. Harriet Dinerstein	McDonald Observatory	Austin, TX
	Dr. Neal Evans	University of Texas at Austin	Austin, TX
	Dr. Karl Gebhardt	McDonald Observatory	Austin, TX
	Dr. Mary Kay Hemenway	University of Texas at Austin	Austin, TX
	Dr. Rob Hynes	McDonald Observatory	Austin, TX
	Dr. Shardha Jogee	McDonald Observatory	Austin, TX
	Dr. Jackie Kessler-Silacci	McDonald Observatory	Austin, TX
	Mr. Mukremine Kilic	McDonald Observatory	Austin, TX
	Dr. Eiichiro Komatsu	McDonald Observatory	Austin, TX
	Dr. Pawan Kumar	McDonald Observatory	Austin, TX
	Dr. John Lacy	McDonald Observatory	Austin, TX
	Dr. David Lambert	University of Texas at Austin	Austin, TX
	Dr. Dan Lester	University of Texas at Austin	Austin, TX
	Mr. Fergal Mullally	McDonald Observatory	Austin, TX
	Dr. Seth Redfield	McDonald Observatory	Austin, TX
	Dr. Judit Ries	University of Texas at Austin	Austin, TX
	Dr. Paul Shapiro	McDonald Observatory	Austin, TX
	Dr. Gregory Shields	McDonald Observatory	Austin, TX
	Mr. Vern Smith	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Laurence Trafton	University of Texas at Austin	Austin, TX
	Dr. Theodore von Hippel	University of Texas at Austin	Austin, TX
	Dr. Craig Wheeler	University of Texas at Austin	Austin, TX
	Mr. Jerry Wiant	McDonald Observatory	Fort Davis, TX
	Dr. Beverley Wills	McDonald Observatory	Austin, TX
	Mr. Chad Young	McDonald Observatory	Austin, TX

Professional Development for Informal Education Providers

A378. Chandra E/PO Grant: After-School Astronomy Project

Theme(s): Astrophysics

Msn/Prgm: SEU[B35], CXO[B44]

Description: This program is a new initiative intended to build the capacity of after-school centers to deliver innovative, science-based out-of-school programming to urban youth by providing professional development opportunities to after-school professionals, who can then implement this new curriculum twice per year. The Chandra After-School Astronomy Project (ASAP) is a project-based program to reinforce learning in astronomy and understanding of science as inquiry through activities that also develop students' computer skills. ASAP consists of a combination of classroom hands-on activities and explorations of the night sky using MicroObservatory. MicroObservatory is a network of educational ground-based telescopes that can be controlled over the Internet, and it is made available to ASAP by the NASA-Smithsonian Universe Education Forum. We also promote a self-sustainable implementation of ASAP by providing professional development opportunities to after-school professionals through a master-coach training program in Boston. ASAP is intended to generate large-scale interest in astronomy and science among urban youth and to create a cadre of after-school professionals dedicated to facilitating science-based programs.

Lead: Dr. Irene Porro, Massachusetts Institute of Technology, Cambridge, MA 02139. E-mail: iporro@space.mit.edu.
Phone: 617-258-7481.

Primary URL: <http://space.mit.edu/EPO/ASAP2005/index.html>

Scientist(s): Dr. Irene Porro Massachusetts Institute of Technology Cambridge, MA

Partner(s): Timothy Smith Network Center Roxbury, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
15 Mar 05	15 Mar 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
22 Mar 05	22 Mar 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
24 Mar 05	24 Mar 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
29 Mar 05	29 Mar 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
31 Mar 05	31 Mar 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0

05 Apr 05	05 Apr 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
07 Apr 05	07 Apr 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
12 Apr 05	12 Apr 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
14 Apr 05	14 Apr 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
28 Apr 05	28 Apr 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
03 May 05	03 May 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0
05 May 05	05 May 05	Roxbury Community College— Roxbury Crossing, MA	12	0	0

A379. Mars: Informal Educator Workshops

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: These workshops for informal educators are professional development opportunities that bring in Mars science and engineering speakers for discussions and questions; cover current science discoveries; and share available, peer-reviewed, formal education classroom activities.

Contact: Ms. Sheri Klug, Arizona State University, Tempe, AZ 85287-1404. E-mail: sklug@asu.edu. Phone: 480-727-6495.

Scientist(s):	Dr. Carlton C. Allen	NASA Johnson Space Center	Houston, TX
	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Ms. Rosalie Bettrue	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Knut Oxnyvad	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
	Ms. Paige Valderrama	Arizona State University	Tempe, AZ

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Dec 04	01 Dec 04	Arizona State University—Tempe, AZ	1	0	0
08 Dec 04	08 Dec 04	Arizona State University—Tempe, AZ	1	0	0
09 Dec 04	09 Dec 04	Arizona State University—Tempe, AZ	1	0	0
09 Feb 05	09 Feb 05	NASA Johnson Space Center—Houston, TX	1	0	0
19 Feb 05	19 Feb 05	Extreme Solar System for Girl Scout Trainers— Big Rapids, MI	154	0	0
24 Feb 05	26 Feb 05	National Afterschool Association— San Antonio, TX	44	0	0
05 Mar 05	05 Mar 05	University of Houston-Downtown—Houston, TX	12	0	0
15 Apr 05	15 Apr 05	Arizona State University—Tempe, AZ	30	0	0
25 Jun 05	05 Jun 05	Mid-Pacific Institute—Honolulu, HI	30	0	0
28 Jun 05	29 Jun 05	University of Hawaii at Hilo—Hilo, HI	29	0	0
30 Jun 05	30 Jun 05	Hawaiian Volcano Observatory— Hawaii National Park, HI	30	0	0

A380. MESSENGER: NASA Explorer Institute

Theme(s): Planetary

Msn/Prgm: MESSENGER[B109]

Description: MESSENGER Education and Public Outreach specialists participated in NASA Explorer Institute Activities for National Park Service (NPS) professionals and Girl Scouts of the USA (GSUSA).

Lead: Ms. Stephanie Stockman, Science Systems and Applications, Inc., Lanham, MD 20706. Phone: 301-614-6457.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	0	35	0
18 Nov 04	20 Nov 04	National Science Teachers Association Regional Conference—Seattle, WA	0	52	0

A381. Solar System Ambassadors Training

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: Space Science Outreach Activities[B30]

Description: Training sessions on mission-related information are provided to Solar System Ambassadors, Solar System Educators, Museum Alliance Members, and now Aerospace Education Specialists. These training sessions involve downloadable materials from Web sites and interaction with mission personnel via telecons. Additionally, transcripts and now MP3 files are provided through a secure Web site. Telecon replays are offered for a week following the initial telecon. This training model is now being used by Cassini Science, Night Sky

Network, the Sun-Earth Connection Education Forum, the Museum Alliance, and NASA JPL media relations as an effective way to pass along information.

Lead: Ms. Kay Ferrari, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Kay.A.Ferrari@jpl.nasa.gov. Phone: 818-354-7581.

Primary URL: <http://www.jpl.nasa.gov/ambassador/ambassadoronlysection/front.html>

Scientist(s):	Mr. David Begay	Albuquerque Astronomical Society	Albuquerque, NM
	Dr. Donald Brownlee	University of Washington	Seattle, WA
	Mr. Troy Cline	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Lori Feaga	Johns Hopkins University	Baltimore, MD
	Ms. Kay Ferrari	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jim Graf	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Isabel Hawkins	University of California, Berkeley	Berkeley, CA
	Mr. Scott Hulme	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Elaine Lewis	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Mario Livio	Space Telescope Science Institute	Baltimore, MD
	Dr. Nancy Maryboy	Diné College	Tsaile, AZ
	Dr. Lucy McFadden	University of Maryland	College Park, MD
	Ms. Trina Ray	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Patti Rhee	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Maura Rountree-Brown	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Doug Sanders	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Daniel Sedlacko	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Colleen Sharkey	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Steve Squyres	Cornell University	Ithaca, NY
	Mr. Shaun Standley	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Edward Stone	California Institute of Technology (Caltech)	Pasadena, CA
	Mr. Guy Webster	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Aimee Whalen	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Peter Xaypraseuth	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Rich Zurek	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Jan 05	20 Jan 05	NASA Jet Propulsion Laboratory— Pasadena, CA	0	175	0
29 Mar 05	29 Mar 05	NASA Jet Propulsion Laboratory— Pasadena, CA	0	138	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	30	0	0

A382. Space Science for Midwest Planetariums

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: DePaul B/F[B37]

Description: The DePaul Broker attends the Great Lakes Planetarium Association (GLPA) conference to inform members about NASA E/PO resources for small planetariums and opportunities for small planetariums to participate in NASA E/PO programs. These include Inside Einstein's Universe, Ancient Observatories-Timeless Knowledge, the NASA Museum Alliance, Hubble SOURCE, ViewSPACE, and the Night Sky Network. We distributed NASA E/PO brochures, posters, etc., at a booth and also handed out application materials for the Planetarium Teaching and Learning Opportunities (PLATO) small grants program. We were also invited to participate in a planning meeting for the January 2005 GLPA NASA Explorer Institute Focus Group (<http://www.transitofvenus.org/focus.htm>).

Lead: Dr. Bernhard Beck-Winchatz, DePaul University, Chicago, IL 60604. E-mail: bbeck@codor.depaul.edu. Phone: 773-325-4545.

Primary URL: <http://www.glpaweb.org>

Secondary

URL: <http://analyzer.depaul.edu/NASABroker>

Scientist(s):	Dr. Bernhard Beck-Winchatz	DePaul University	Chicago, IL
	Ms. Tamra Gentry	DePaul University	Chicago, IL

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
20 Oct 04	23 Oct 04	Great Lakes Planetarium Association Annual Conference—Troy, MI	0	170	0

Informal Education Provider Involvement Opportunities

A383. Earth to Sky-An Innovative Partnership: NASA and the National Park Service

Theme(s): Heliophysics

Msn/Prgm: "Earth Observatory"[B11], SECEF[B36]

Description: Earth to Sky is an exciting partnership between NASA's space and Earth science disciplines and the National Park Service (NPS). As individual institutions, both NASA and NPS strive to protect and share with the public

the beauty and knowledge of the natural world. Together, we hope to support each other's visions and work to enrich the experiences of millions of park visitors throughout America. With funding from the NASA Explorer Institutes, the Earth to Sky partnership launched a pilot program in the fall of 2004. A set of professional development workshops, the Earth to Sky Institutes, offered a group of NPS interpreters opportunities to explore NASA content and resources.

Lead: Ms. Ruth Paglierani, University of California, Berkeley, Berkeley, CA 94720. Phone: 510-643-5669.
 Scientist(s): Ms. Renee Frappier University of California, Berkeley Berkeley, CA
 Ms. Karin Hauck University of California, Berkeley Berkeley, CA
 Dr. Isabel Hawkins University of California, Berkeley Berkeley, CA
 Ms. Carolyn Ng NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Ruth Paglierani University of California, Berkeley Berkeley, CA
 Ms. Darlene Park University of California, Berkeley Berkeley, CA
 Mr. Igor Ruderman University of California, Berkeley Berkeley, CA
 Dr. Greg Schultz University of California, Berkeley Berkeley, CA
 Dr. James Thieman NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Jackie Wong University of California, Berkeley Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
18 Oct 04	22 Oct 04	Mather Center—Harpers Ferry, WV	45	0	0
18 Oct 04	22 Oct 04	NASA Ames Research Center—Moffett Field, CA	45	0	0

A384. Mars: Museum Visualization Alliance

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: The Mars Visualization Alliance is a partnership with science centers, museums, and other informal education partners to disseminate collections of imagery for significant exhibition displays and large-screen viewings. Museums, science centers, and planetariums are venues for the public to "share in the experience" in NASA missions. During major mission events, participating institutions have assured and uninterrupted access to visualizations, something that can prove challenging if these participants are competing on the Internet with millions of interested members of the public. Investments, based on museum partner inputs, are made in a requisite infrastructure that provides dedicated servers and bandwidth for access to high-resolution, museum-formatted materials. Satellite downlink opportunities are also widely publicized through museum networks and associations. Over 140 organizations are receiving Mars Exploration Rover and other Mars mission images and professional development opportunities with direct information from Mars scientists and engineers on a regular basis. The goal is for their audiences to be able to experience current scientific discoveries with "almost-live" images from Mars.

Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov. Phone: 818-354-8774.

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 Dr. Rich Zurek NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Denver Museum of Natural History— Denver, CO	108100	0	0

A385. Solar System Ambassadors (SSA) Program

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: Space Science Outreach Activities[B30]

Description: Solar System Ambassadors are specially trained volunteers who share information about NASA Earth and space missions with members of their local communities. Currently, 450 Ambassadors in all 50 States, the District of Columbia, and Puerto Rico personalize the space program for communities across the Nation. Support for the SSA program comes from Cassini, Dawn (through Discovery), Deep Impact, the Deep Space Network, Genesis, Mars (thematically), MESSENGER (through Discovery), New Horizons (through Discovery), the Solar System Exploration Forum, Stardust, Ulysses, Voyager, Earth missions (thematically), and the Sun-Earth Connection Education Forum.

Lead: Ms. Kay Ferrari, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Kay.A.Ferrari@jpl.nasa.gov. Phone: 818-354-7581.

Primary URL: <http://www.jpl.nasa.gov/ambassador/front.html>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	01 Oct 04	"Mahoning Valley Parent Magazine"— Youngstown, OH	0	55000	0
01 Oct 04	01 Oct 04	Eagle River Nature Center—Eagle River, AK	0	20	0

01 Oct 04	01 Oct 04	Embassy Suites Hotel—Tempe, AZ	0	60	0
01 Oct 04	01 Oct 04	Freeport McMoRan Daily Living Science Center— Kenner, LA	0	35	0
01 Oct 04	01 Oct 04	Northern Michigan University—Marquette, MI	0	20	0
01 Oct 04	01 Oct 04	Washington Middle School—Albuquerque, NM	0	75	0
01 Oct 04	02 Oct 04	Seagrave Memorial Observatory— North Scituate, RI	0	150	0
01 Oct 04	03 Oct 04	Sunriver Nature Center and Observatory— Sunriver, OR	0	400	0
01 Oct 04	15 Oct 04	Calusa Nature Center and Planetarium— Fort Myers, FL	0	44	0
01 Oct 04	01 Nov 04	Robeson Planetarium and Science Center— Lumberton, NC	0	1650	0
01 Oct 04	23 Nov 04	Noble Planetarium—Fort Worth, TX	0	1620	0
01 Oct 04	01 Dec 04	“Mahoning Valley Parent Magazine”— Youngstown, OH	0	55000	0
01 Oct 04	17 Dec 04	Noble Planetarium—Fort Worth, TX	0	200	0
01 Oct 04	20 Dec 04	Museum of Science and History— Jacksonville, FL	0	1500	0
01 Oct 04	31 Dec 04	Kid's Cosmos—Spokane, WA	0	0	3000
01 Oct 04	01 Jun 05	Three Rivers Educational Partnership—Joliet, IL	0	12683	38
01 Oct 04	30 Jun 05	Calumet Astronomical Society—Hammond, IN	0	78	0
01 Oct 04	01 Aug 05	St. Mark's School of Texas—Dallas, TX	0	20	0
01 Oct 04	31 Aug 05	Marlboro County School of Discovery—Clio, SC	0	44	0
01 Oct 04	25 Sep 05	“Cincinnati Enquirer”—Cincinnati, OH	0	70000	0
01 Oct 04	30 Sep 05	“Press & Sun Bulletin”—Vestal, NY	0	61000	0
01 Oct 04	30 Sep 05	Casper Planetarium—Casper, WY	0	7500	0
01 Oct 04	30 Sep 05	Drake Planetarium—Cincinnati, OH	0	0	450000
01 Oct 04	30 Sep 05	Drake Planetarium—Cincinnati, OH	0	200	0
01 Oct 04	30 Sep 05	Noble Planetarium—Fort Worth, TX	0	950	0
02 Oct 04	02 Oct 04	Andover Days Festival—Andover, KS	0	600	0
02 Oct 04	02 Oct 04	Embassy Suites Hotel—Tempe, AZ	0	43	0
02 Oct 04	02 Oct 04	Emporia State University—Emporia, KS	0	21200	0
02 Oct 04	02 Oct 04	Prescott Astronomy Club—Mayer, AZ	0	62	0
02 Oct 04	02 Oct 04	Tucker Reid H. Cofer Library—Tucker, GA	0	25	0
03 Oct 04	03 Oct 04	“Morning Journal”—Lisbon, OH	0	14600	0
03 Oct 04	03 Oct 04	Elmwood Jail for Women—Milpitas, CA	0	6	0
03 Oct 04	14 Jan 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	424	0
04 Oct 04	04 Oct 04	Environmental Studies Center—Mobile, AL	0	75	0
04 Oct 04	04 Oct 04	Freeport McMoRan Daily Living Science Center— Kenner, LA	0	33	0
04 Oct 04	04 Oct 04	Lyon College—Batesville, AR	0	6	0
04 Oct 04	04 Oct 04	Novins Planetarium—Toms River, NJ	0	22	0
04 Oct 04	04 Oct 04	University of Wisconsin-Sheboygan— Sheboygan, WI	0	45	0
04 Oct 04	09 Oct 04	St. Mark's School of Texas—Dallas, TX	0	180	0
04 Oct 04	10 Oct 04	TV 30, Princeton Community Television— Princeton, NJ	0	500	0
04 Oct 04	26 Sep 05	Fairfield/Sapphire Valley Community Center— Sapphire, NC	0	1600	0
05 Oct 04	05 Oct 04	Freeport McMoRan Daily Living Science Center— Kenner, LA	0	34	0
05 Oct 04	05 Oct 04	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
05 Oct 04	05 Oct 04	Minnehaha Academy-South—Minneapolis, MN	0	50	0
05 Oct 04	20 Sep 05	Rocky Mountain Radio League—Denver, CO	0	436	0
06 Oct 04	06 Oct 04	“Appalachian News-Express”—Pikeville, KY	0	9660	0
06 Oct 04	06 Oct 04	Calusa Nature Center and Planetarium— Fort Myers, FL	0	30	0
06 Oct 04	06 Oct 04	Onizuka Space Center—Kailua-Kona, HI	0	10	0
07 Oct 04	07 Oct 04	Lockheed Martin Space Systems—Littleton, CO	0	100	0
07 Oct 04	07 Oct 04	Manzanita Elementary School—Grants Pass, OR	0	68	0
07 Oct 04	07 Oct 04	Museum of Flight—Seattle, WA	0	200	0
07 Oct 04	07 Oct 04	Owatonna Public Library—Owatonna, MN	0	28	0
07 Oct 04	07 Oct 04	Wayne Middle School—Bicknell, UT	0	121	0
08 Oct 04	08 Oct 04	“The Union-Recorder”—Milledgeville, GA	0	8500	0
08 Oct 04	08 Oct 04	St. Augustine High School—St. Augustine, FL	0	22	0
08 Oct 04	08 Oct 04	St. Paul School for Dyslexia—Houma, LA	0	22	0

08 Oct 04	08 Oct 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
08 Oct 04	08 Oct 04	Ward Beecher Planetarium—Youngstown, OH	0	8	0
08 Oct 04	09 Oct 04	Chapin High School—El Paso, TX	0	18	0
08 Oct 04	10 Oct 04	Washington Space Grant Consortium— Seattle, WA	0	1000	0
09 Oct 04	09 Oct 04	Frontiers of Flight Museum—Dallas, TX	0	200	0
09 Oct 04	09 Oct 04	Sky Meadows State Park—Delaplane/Paris, VA	0	50	0
09 Oct 04	09 Oct 04	Texas Tech University—Lubbock, TX	0	43	0
09 Oct 04	10 Oct 04	LaFayette Festival Grounds—LaFayette, NY	0	300	0
10 Oct 04	10 Oct 04	"Morning Journal"—Lisbon, OH	0	14600	0
10 Oct 04	10 Oct 04	Heritage Middle School—Westerville, OH	0	90	0
10 Oct 04	10 Oct 04	North Carolina State University—Raleigh, NC	0	4000	0
10 Oct 04	10 Oct 04	Syracuse University—Syracuse, NY	0	100	0
11 Oct 04	11 Oct 04	Brooks on Saint Paul—Owatonna, MN	0	19	0
11 Oct 04	17 Oct 04	TV 30, Princeton Community Television— Princeton, NJ	0	500	0
12 Oct 04	12 Oct 04	Central Wyoming Astronomical Society— Casper, WY	0	20	0
12 Oct 04	12 Oct 04	Cub Scout Troop 249—Owatonna, MN	0	25	0
12 Oct 04	12 Oct 04	Kiwanis Club of Palm Beach—Palm Beach, FL	0	50	0
12 Oct 04	12 Oct 04	Rocky Mountain Radio League—Denver, CO	0	7	0
12 Oct 04	12 Oct 04	University of Hawaii at Hilo—Hilo, HI	0	220	600
12 Oct 04	12 Oct 04	Westminster Public Library, Irving Street Branch— Westminster, CO	0	25	0
12 Oct 04	13 Oct 04	Stargazers Inn and Observatory— Big Bear Lake, CA	0	290	0
13 Oct 04	13 Oct 04	Colegio Radians—Cayey, Puerto Rico	0	150	0
14 Oct 04	14 Oct 04	Casper College—Casper, WY	0	21	0
14 Oct 04	14 Oct 04	East Palo Alto Elementary School— East Palo Alto, CA	0	89	0
14 Oct 04	14 Oct 04	Great Lakes Planetarium Association— Cleveland, OH	0	28	0
14 Oct 04	14 Oct 04	Norfolk Christian Elementary School— Virginia Beach, VA	0	32	0
14 Oct 04	14 Oct 04	Oklahoma Space Grant Consortium— Norman, OK	0	80	0
14 Oct 04	14 Oct 04	Oregon Museum of Science and Industry— Portland, OR	0	200	0
14 Oct 04	14 Oct 04	Robbinwood Senior Apartments—Faribault, MN	0	40	0
14 Oct 04	15 Oct 04	St. Mark's School of Texas—Dallas, TX	0	25	0
14 Oct 04	16 Oct 04	Sunriver Nature Center and Observatory— Sunriver, OR	0	25400	0
15 Oct 04	15 Oct 04	Camp Reeves Boy Scout Camp—Robbins, MD	0	40	0
15 Oct 04	15 Oct 04	Colegio Radians—Cayey, Puerto Rico	0	150	0
15 Oct 04	15 Oct 04	Council Grove Elementary School— Council Grove, KS	0	650	0
15 Oct 04	15 Oct 04	Eagle River Nature Center—Eagle River, AK	0	60	0
15 Oct 04	15 Oct 04	National Space Science and Technology Institute—Colorado Springs, CO	0	125	0
15 Oct 04	15 Oct 04	Novins Planetarium—Toms River, NJ	0	22	0
15 Oct 04	15 Oct 04	Novins Planetarium—Toms River, NJ	0	25	0
15 Oct 04	15 Oct 04	Trenton Diocese—Lawrenceville, NJ	0	60	0
15 Oct 04	15 Sep 05	"Central Florida Computer Society Weekly News"—Orlando, FL	0	36000	0
15 Oct 04	15 Sep 05	Lockheed Martin retirees' newsletter— Orlando, FL	0	3600	0
16 Oct 04	16 Oct 04	Arizona State University—Tempe, AZ	0	2000	1000
16 Oct 04	16 Oct 04	Drake Planetarium—Cincinnati, OH	0	70	0
16 Oct 04	16 Oct 04	El Paso Independent School District—El Paso, TX	0	40	0
16 Oct 04	16 Oct 04	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	60	0
16 Oct 04	16 Oct 04	Kaibeto Boarding School—Kaibeto, AZ	0	500	0
16 Oct 04	16 Oct 04	Morrison Nature Center—Aurora, CO	0	10	0
18 Oct 04	18 Oct 04	Bryce Canyon National Park—Bryce Canyon, UT	0	85	0
18 Oct 04	18 Oct 04	Morrow Observatory—Bedford, IN	0	14	0
18 Oct 04	18 Oct 04	Shaker Heights Middle School— Shaker Heights, OH	0	160	0
18 Oct 04	18 Oct 04	Waterford School District—Waterford, MI	0	110	0

19 Oct 04	19 Oct 04	NASA Ames Research Center—Moffett Field, CA	0	45	0
19 Oct 04	19 Oct 04	North Riverside Public Library—			
		North Riverside, IL	0	3	0
19 Oct 04	19 Oct 04	Rocky Mountain Radio League—Denver, CO	0	9	0
20 Oct 04	20 Oct 04	Lodge Iguualdad Order of the Eastern Star—			
		Sabana Grande, Puerto Rico	0	40	0
20 Oct 04	25 Oct 04	Creamers Field Waterfowl Refuge—			
		Fairbanks, AK	0	100	0
20 Oct 04	22 Jun 05	Charter School for Applied Technologies—			
		Kenmore, NY	0	1500	0
21 Oct 04	21 Oct 04	Environmental Studies Center—Mobile, AL	0	500	0
21 Oct 04	21 Oct 04	Morton College—Cicero, IL	0	15	0
21 Oct 04	21 Oct 04	Oklahoma Science Teachers Association			
		Meeting—Tulsa, OK	0	40	0
21 Oct 04	21 Oct 04	Park Valley School—Park Valley, UT	0	22	0
21 Oct 04	21 Oct 04	West Forsyth High School—Winston-Salem, NC	0	70	0
21 Oct 04	21 Oct 04	Whitman Elementary School—Littleton, CO	0	150	0
22 Oct 04	22 Oct 04	“The Union-Recorder”—Milledgeville, GA	0	8500	0
22 Oct 04	22 Oct 04	Massachusetts Institute of Technology—			
		Cambridge, MA	0	83	0
22 Oct 04	22 Oct 04	Sespe School—Fillmore, CA	0	135	0
22 Oct 04	22 Oct 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
23 Oct 04	23 Oct 04	Conclave 29 Science Fiction Convention—			
		Lansing, MI	0	28	0
23 Oct 04	23 Oct 04	NASA Kennedy Space Center—			
		Kennedy Space Center, FL	0	13	0
23 Oct 04	23 Oct 04	WDOK Radio, 102.1 FM/Cleveland—			
		Cleveland, OH	0	5000	0
24 Oct 04	30 Sep 05	Wisconsin Science Network—DeForest, WI	0	1200	0
25 Oct 04	25 Oct 04	“Deseret News”—Salt Lake City, UT	0	67000	0
25 Oct 04	25 Oct 04	Chouteau Elementary School—Chouteau, OK	0	27	0
25 Oct 04	25 Oct 04	Columbia University—New York, NY	0	10	0
25 Oct 04	25 Oct 04	Freeport McMoRan Daily Living Science Center—			
		Kenner, LA	0	11	0
25 Oct 04	25 Oct 04	Las Positas College—Livermore, CA	0	42	0
25 Oct 04	25 Oct 04	University of Wisconsin-Sheboygan—			
		Sheboygan, WI	0	40	0
26 Oct 04	26 Oct 04	Palo Verde Middle School—Phoenix, AZ	0	125	0
27 Oct 04	27 Oct 04	Carson Nature Center—Littleton, CO	0	10	0
27 Oct 04	27 Oct 04	CBS Corporation—New York, NY	0	1000000	0
27 Oct 04	27 Oct 04	Chouteau High School—Chouteau, OK	0	11	0
27 Oct 04	27 Oct 04	Eisenhower Observatory—Hopkins, MN	0	150	0
27 Oct 04	27 Oct 04	Henize Science Center—Crystal Lake, IL	0	44	0
27 Oct 04	27 Oct 04	Las Positas College—Livermore, CA	0	42	0
27 Oct 04	27 Oct 04	Mimi's Cafe—Whittier, CA	0	22	0
27 Oct 04	27 Oct 04	Moorpark College—Moorpark, CA	0	350	0
27 Oct 04	27 Oct 04	NASA Ames Research Center—Moffett Field, CA	0	450000	0
27 Oct 04	27 Oct 04	Novins Planetarium—Toms River, NJ	0	206	0
27 Oct 04	27 Oct 04	Parkland High School—Winston-Salem, NC	0	240	0
27 Oct 04	27 Oct 04	Sky Meadows State Park—Delaplane/Paris, VA	0	57	0
27 Oct 04	27 Oct 04	St. Augustine High School—St. Augustine, FL	0	10	0
27 Oct 04	27 Oct 04	St. Mark's School of Texas—Dallas, TX	0	125	0
27 Oct 04	27 Oct 04	Star Light-Star Bright Observatory—			
		Colorado Springs, CO	0	62	0
27 Oct 04	27 Oct 04	Tranquility Observatory—West Manchester, OH	0	50	0
27 Oct 04	27 Oct 04	WTAM Radio, 1100 AM/Cleveland—			
		Cleveland, OH	0	155500	0
27 Oct 04	27 Oct 04	WTOP Radio, 103.5 FM/Washington—			
		Washington, DC	0	500000	0
27 Oct 04	28 Oct 04	Kemps Landing Magnet School—			
		Virginia Beach, VA	0	100	0
27 Oct 04	04 Aug 05	Drake Planetarium—Cincinnati, OH	0	2310	0
28 Oct 04	28 Oct 04	Cranbrook Institute of Science—			
		Bloomfield Hills, MI	0	100500	0
28 Oct 04	28 Oct 04	Newport Book Wizards—Newport, OR	0	8	0
28 Oct 04	18 Aug 05	Drake Planetarium—Cincinnati, OH	0	240	0
29 Oct 04	29 Oct 04	Arizona State University—Tempe, AZ	0	500	0
29 Oct 04	29 Oct 04	Tulsa Air and Space Museum—Tulsa, OK	0	75	0

29 Oct 04	29 Oct 04	Universidad Central de Bayamon— Bayamon, Puerto Rico	0	120	0
29 Oct 04	29 Oct 04	University of Hawaii at Hilo—Hilo, HI	0	220	600
29 Oct 04	29 Oct 04	University of Michigan—Ann Arbor, MI	0	150	0
29 Oct 04	17 Dec 04	Northeast School—Stamford, CT	0	15	0
30 Oct 04	30 Oct 04	Girl Scouts of Kansas—Topeka, KS	0	260	0
30 Oct 04	30 Oct 04	Great Lakes Planetarium Association— Cleveland, OH	0	45	0
30 Oct 04	30 Oct 04	Punahou School—Honolulu, HI	0	50	0
30 Oct 04	30 Oct 04	Southwestern Middle School—Windsor, NC	0	179	0
30 Oct 04	30 Oct 04	Wichita Children's Theatre—Wichita, KS	0	1200	0
31 Oct 04	31 Oct 04	"Morning Journal"—Lisbon, OH	0	14600	0
01 Nov 04	01 Nov 04	"Dick Goddard's Almanac for Northeast Ohio"— Lakewood, OH	0	4000	0
01 Nov 04	01 Nov 04	"Longmont Daily Times-Call"—Longmont, CO	0	50000	0
01 Nov 04	01 Nov 04	Boy Scouts—Chicago, IL	0	150	0
01 Nov 04	01 Nov 04	Las Positas College—Livermore, CA	0	42	0
01 Nov 04	01 Nov 04	University of Wisconsin-Sheboygan— Sheboygan, WI	0	44	0
01 Nov 04	01 Nov 04	Waterford School District—Waterford, MI	0	120	0
01 Nov 04	07 Nov 04	TV 30, Princeton Community Television— Princeton, NJ	0	500	0
01 Nov 04	17 Dec 04	Robeson Planetarium and Science Center— Lumberton, NC	0	1450	0
01 Nov 04	16 Sep 05	University of Tennessee—Knoxville, TN	0	35	0
02 Nov 04	30 Sep 05	University of North Texas—Denton, TX	0	20200	0
03 Nov 04	03 Nov 04	"Appalachian News-Express"—Pikeville, KY	0	9660	0
03 Nov 04	03 Nov 04	Adele C. Young Intermediate School— Brigham City, UT	0	580	0
03 Nov 04	03 Nov 04	Albuquerque Science Teachers Association— Albuquerque, NM	0	12	0
03 Nov 04	03 Nov 04	Chouteau High School—Chouteau, OK	0	21	0
03 Nov 04	03 Nov 04	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
03 Nov 04	03 Nov 04	Las Positas College—Livermore, CA	0	42	0
03 Nov 04	03 Nov 04	St. Mark's School of Texas—Dallas, TX	0	500	0
04 Nov 04	04 Nov 04	Boston Public Library—Boston, MA	0	25	0
04 Nov 04	04 Nov 04	Hilo Hongwanji Sangha Hall—Hilo, HI	0	1000	0
04 Nov 04	04 Nov 04	Owatonna Public Library—Owatonna, MN	0	24	0
04 Nov 04	04 Nov 04	Waikoloa Elementary School—Waikoloa, HI	0	25	0
04 Nov 04	04 Nov 04	Weinman Mineral Museum—Cartersville, GA	0	25	0
04 Nov 04	05 Nov 04	Atlantic City New Convention Hall— Atlantic City, NJ	0	100	0
04 Nov 04	06 Nov 04	Recharging Science Education— Corpus Christi, TX	0	11	0
05 Nov 04	05 Nov 04	"The Union-Recorder"—Milledgeville, GA	0	8500	0
05 Nov 04	05 Nov 04	"Vero Beach Press Journal"—Vero Beach, FL	0	40000	0
05 Nov 04	05 Nov 04	Bright Beginning School—Chandler, AZ	0	70	0
05 Nov 04	05 Nov 04	Challenger Space Center—Peoria, AZ	0	53	0
05 Nov 04	05 Nov 04	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	30	0
05 Nov 04	05 Nov 04	First Methodist Church—Milledgeville, GA	0	50	0
05 Nov 04	05 Nov 04	Kea'au High School—Kea'au, HI	0	200	0
05 Nov 04	05 Nov 04	Museum of Science and Industry—Tampa, FL	0	15	0
05 Nov 04	05 Nov 04	Oracle Corporation—Redwood Shores, CA	0	128	0
05 Nov 04	05 Nov 04	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	0
05 Nov 04	06 Nov 04	Western Washington University—Bellingham, WA	0	80	0
06 Nov 04	06 Nov 04	Bob Brown Expo Hall—Wichita, KS	0	9500	0
06 Nov 04	06 Nov 04	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
06 Nov 04	06 Nov 04	Science Museum of Minnesota—St. Paul, MN	0	20	0
06 Nov 04	06 Nov 04	University of South Florida—Tampa, FL	0	77	0
06 Nov 04	30 Sep 05	Casper Planetarium—Casper, WY	0	7000	0
07 Nov 04	07 Nov 04	Great Basin College—Elko, NV	0	7	0
08 Nov 04	08 Nov 04	Eisenhower Observatory—Hopkins, MN	0	2000000	0
08 Nov 04	08 Nov 04	Laurens Central School—Laurens, NY	0	25	0
08 Nov 04	08 Nov 04	Neale Woods Nature Center—Omaha, NE	0	15562	0
08 Nov 04	08 Nov 04	Sulphur Rock High School—Sulphur Rock, AR	0	20	0
09 Nov 04	09 Nov 04	"Deseret News"—Salt Lake City, UT	0	67000	0

09 Nov 04	09 Nov 04	Brownsville Public Library—Brownsville, TX	0	60	0
09 Nov 04	09 Nov 04	Central Wyoming Astronomical Society—Casper, WY	0	15	0
09 Nov 04	09 Nov 04	Clover Ridge Elementary School—Chaska, MN	0	30	0
09 Nov 04	09 Nov 04	Morris Central School—Morris, NY	0	23	0
09 Nov 04	09 Nov 04	Pacific Coast High School—Tustin, CA	0	54	0
09 Nov 04	09 Nov 04	Stargazers Inn and Observatory—Big Bear Lake, CA	0	350	0
10 Nov 04	10 Nov 04	Artesia Lions Club—Artesia, NM	0	42	0
10 Nov 04	10 Nov 04	Big Bear Rotary Club—Big Bear Lake, CA	0	35	0
10 Nov 04	10 Nov 04	Brockett Elementary School—Tucker, GA	0	25	0
10 Nov 04	10 Nov 04	The Country School—North Hollywood, CA	0	20	0
11 Nov 04	11 Nov 04	Barnes Elementary School—Beaverton, OR	0	23	0
11 Nov 04	11 Nov 04	Greenhills School—Winston-Salem, NC	0	20	0
11 Nov 04	11 Nov 04	North Hills High School Planetarium—Pittsburgh, PA	0	11	0
11 Nov 04	12 Nov 04	Koury Convention Center—Greensboro, NC	0	100	0
11 Nov 04	12 Nov 04	North Carolina Science Teachers Association—Greensboro, NC	0	42	0
12 Nov 04	12 Nov 04	Hidden Valley Elementary School—Savage, MN	0	130	0
12 Nov 04	12 Nov 04	Schuylkill Center for Environmental Education—Philadelphia, PA	0	65	0
12 Nov 04	12 Nov 04	St. Augustine High School—St. Augustine, FL	0	31	0
12 Nov 04	12 Nov 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
12 Nov 04	13 Nov 04	Camp Carlquist—Anchorage, AK	0	16	0
12 Nov 04	14 Nov 04	Huntsville Airport Sheraton Hotel—Huntsville, AL	0	180	0
13 Nov 04	13 Nov 04	Lyon College—Batesville, AR	0	8	0
13 Nov 04	13 Nov 04	NASA Kennedy Space Center—Kennedy Space Center, FL	0	8	0
13 Nov 04	13 Nov 04	San Diego State University—San Diego, CA	0	120	0
13 Nov 04	13 Nov 04	Science Museum of Minnesota—St. Paul, MN	0	30	0
13 Nov 04	13 Nov 04	Sky Meadows State Park—Delaplane/Paris, VA	0	50	0
13 Nov 04	13 Nov 04	Windycon Science Fiction Convention—Rosemont, IL	0	16	0
13 Nov 04	13 Nov 04	Windycon Science Fiction Convention—Rosemont, IL	0	30	0
14 Nov 04	14 Nov 04	Gloria Dei Church—Arnold, MD	0	65	0
14 Nov 04	14 Nov 04	Tech Museum of Innovation—San Jose, CA	0	200	0
14 Nov 04	14 Nov 04	Windycon Science Fiction Convention—Rosemont, IL	0	18	0
15 Nov 04	15 Nov 04	Calusa Nature Center and Planetarium—Fort Myers, FL	0	32	0
15 Nov 04	15 Nov 04	Las Positas College—Livermore, CA	0	42	0
15 Nov 04	15 Nov 04	Laurens Central School—Laurens, NY	0	25	0
15 Nov 04	15 Nov 04	Mirman School for Gifted Children—Los Angeles, CA	0	8399	0
15 Nov 04	15 Nov 04	Morrow Observatory—Bedford, IN	0	15	0
15 Nov 04	15 Nov 04	Oceanside Public Library—Oceanside, CA	0	60	0
15 Nov 04	15 Nov 04	Tupper Planetarium—Centereach, NY	0	100	0
15 Nov 04	15 Nov 04	University of Hawaii at Hilo—Hilo, HI	0	220	600
15 Nov 04	24 May 05	Drake Planetarium—Cincinnati, OH	0	625	0
16 Nov 04	16 Nov 04	Batesville East Head Start—Batesville, AR	0	40	0
16 Nov 04	16 Nov 04	Belknap Elementary School—Beaver, UT	0	62	0
16 Nov 04	16 Nov 04	Brownsville Public Library—Brownsville, TX	0	90	0
16 Nov 04	16 Nov 04	Manheim Township High School—Lancaster, PA	0	300	0
16 Nov 04	16 Nov 04	Rocky Mountain Radio League—Denver, CO	0	10	0
16 Nov 04	16 Nov 04	Tupper Planetarium—Centereach, NY	0	80	0
16 Nov 04	16 Nov 04	University of Alaska, Fairbanks—Fairbanks, AK	0	84	0
16 Nov 04	16 Nov 04	West Cartaret High School, Morehead, NC	0	224	0
17 Nov 04	17 Nov 04	Blanker School—Orlando, FL	0	32	0
17 Nov 04	17 Nov 04	Cibola High School—Albuquerque, NM	0	350	0
17 Nov 04	17 Nov 04	Denny's Restaurant—Overland Park, KS	0	37	0
17 Nov 04	17 Nov 04	F.A. Cleveland School—Norwood, MA	0	60	0
17 Nov 04	17 Nov 04	Front Range Community College—Longmont, CO	0	13	0
17 Nov 04	17 Nov 04	Las Positas College—Livermore, CA	0	42	0
17 Nov 04	17 Nov 04	Rancho Hills Elementary School—Phillips Ranch, CA	0	21	0

17 Nov 04	17 Nov 04	Tucson Amateur Astronomy Association— Tucson, AZ	0	200	0
17 Nov 04	17 Nov 04	Whittamore Road Fire Station—Chesapeake, VA	0	14	0
17 Nov 04	18 Nov 04	Parowan Elementary School—Parowan, UT	0	77	0
18 Nov 04	18 Nov 04	Greenbrier Middle School—Chesapeake, VA	0	400	0
18 Nov 04	18 Nov 04	Hilo Hawaiian Hotel—Hilo, HI	0	100	0
18 Nov 04	18 Nov 04	NASA Ames Research Center—Moffett Field, CA	0	8	0
18 Nov 04	18 Nov 04	Northwoods Elementary School— Jacksonville, NC	0	73	0
18 Nov 04	18 Nov 04	Tupper Planetarium—Centereach, NY	0	100	0
19 Nov 04	19 Nov 04	“The Union-Recorder”—Milledgeville, GA	0	8500	0
19 Nov 04	19 Nov 04	Elliott Elementary School—Irving, TX	0	100	0
19 Nov 04	19 Nov 04	Greenbrier Middle School—Chesapeake, VA	0	300	0
19 Nov 04	19 Nov 04	Koury Convention Center—Greensboro, NC	0	24	0
19 Nov 04	19 Nov 04	Morton College—Cicero, IL	0	14	0
19 Nov 04	19 Nov 04	Sheraton Seattle Hotel & Towers—Seattle, WA	0	75	0
19 Nov 04	19 Nov 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
19 Nov 04	19 Nov 04	Tupper Planetarium—Centereach, NY	0	126	0
20 Nov 04	20 Nov 04	Chouteau High School—Chouteau, OK	0	30	0
20 Nov 04	20 Nov 04	Custer Institute—Southold, NY	0	50	0
20 Nov 04	20 Nov 04	Exploration Science Center and Children’s Museum of Albuquerque—Albuquerque, NM	0	60	0
20 Nov 04	20 Nov 04	Kittitas Environmental Education Network— Ellensburg, WA	0	276	0
20 Nov 04	20 Nov 04	St. Mark’s School of Texas—Dallas, TX	0	125	0
21 Nov 04	21 Nov 04	KEDT-TV, Channel 16/Corpus Christi— Corpus Christi, TX	0	48	0
21 Nov 04	21 Nov 04	Unitarian Universalist Church of Midland— Midland, TX	0	36	0
22 Nov 04	22 Nov 04	Buck County 4-H Club—Doylestown, PA	0	45	0
22 Nov 04	28 Nov 04	TV 30, Princeton Community Television— Princeton, NJ	0	500	0
23 Nov 04	23 Nov 04	Austin High School—El Paso, TX	0	40	0
23 Nov 04	23 Nov 04	Palo Verde Middle School—Phoenix, AZ	0	125	0
24 Nov 04	24 Nov 04	Hilo Intermediate School—Hilo, HI	0	200	0
25 Nov 04	25 Nov 04	Newport Book Wizards—Newport, OR	0	6	0
29 Nov 04	29 Nov 04	“Longmont Daily Times-Call”—Longmont, CO	0	50000	0
29 Nov 04	29 Nov 04	Hilo Intermediate School—Hilo, HI	0	90	0
29 Nov 04	29 Nov 04	Las Positas College—Livermore, CA	0	42	0
29 Nov 04	29 Nov 04	Tupper Planetarium—Centereach, NY	0	100	0
30 Nov 04	30 Nov 04	Mountain Brook High School— Mountain Brook, AL	0	100	0
30 Nov 04	30 Nov 04	University of North Texas—Denton, TX	0	150	0
30 Nov 04	30 Nov 04	WHMC-TV, Channel 23/Conway—Columbia, SC	0	95	0
30 Nov 04	02 Dec 04	Tucker Valley Elementary/Middle School— Hambleton, WV	0	15	0
01 Dec 04	01 Dec 04	“Appalachian News-Express”—Pikeville, KY	0	9660	0
01 Dec 04	31 Dec 04	Calusa Nature Center and Planetarium— Fort Myers, FL	0	577	0
01 Dec 04	15 Feb 05	La Center School District—La Center, WA	0	1500	0
02 Dec 04	02 Dec 04	Jewish Home of Rochester—Rochester, NY	0	500	0
02 Dec 04	02 Dec 04	Lucio Middle School—Brownsville, TX	0	142	0
02 Dec 04	02 Dec 04	Owatonna Public Library—Owatonna, MN	0	22	0
02 Dec 04	02 Dec 04	Rio Vista Elementary School— San Bernardino, CA	0	75	0
02 Dec 04	02 Dec 04	Science Museum of Minnesota—St. Paul, MN	0	150	0
03 Dec 04	03 Dec 04	“The Union-Recorder”—Milledgeville, GA	0	8500	0
03 Dec 04	03 Dec 04	Alpine Grove Park—St. Augustine, FL	0	24	0
03 Dec 04	03 Dec 04	Novins Planetarium—Toms River, NJ	0	100	0
03 Dec 04	03 Dec 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
03 Dec 04	03 Dec 04	University of North Texas—Denton, TX	0	150	0
04 Dec 04	04 Dec 04	Howard County Central Library—Columbia, MD	0	15	0
04 Dec 04	04 Dec 04	Howard County Glenwood Library— Columbia, MD	0	30	0
04 Dec 04	04 Dec 04	NASA Kennedy Space Center— Kennedy Space Center, FL	0	6	0
04 Dec 04	04 Dec 04	Shaker Heights High School—Shaker Heights, OH	0	80	0
04 Dec 04	04 Dec 04	Tamke-Allan Observatory—Oak Ridge, TN	0	50	1000

05 Dec 04	05 Dec 04	Shaker Heights High School—Shaker Heights, OH	0	38	0
05 Dec 04	08 Dec 04	Center for Mathematics and Science Education— Fayetteville, AR	0	60	0
06 Dec 04	06 Dec 04	Columbia University—New York, NY	0	8	0
06 Dec 04	06 Dec 04	KSVY Radio, 91.3 FM/Sonoma—Sonoma, CA	0	5000	0
06 Dec 04	06 Dec 04	Las Positas College—Livermore, CA	0	42	0
06 Dec 04	06 Dec 04	Penn Laurel Girl Scouts—Lancaster, PA	0	120	0
06 Dec 04	06 Dec 04	Waterford School District—Waterford, MI	0	115	0
06 Dec 04	06 Dec 04	Worcester Central School—Worcester, NY	0	28	0
06 Dec 04	06 Dec 04	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	0
06 Dec 04	14 Dec 04	Robeson Planetarium and Science Center— Lumberton, NC	0	300	0
07 Dec 04	07 Dec 04	Summit School—Winston-Salem, NC	0	70	0
08 Dec 04	08 Dec 04	Boy Scout Troop 507—Naperville, IL	0	50	0
08 Dec 04	08 Dec 04	Farmersville Middle School—Farmersville, CA	0	108	0
08 Dec 04	08 Dec 04	Las Positas College—Livermore, CA	0	42	0
08 Dec 04	08 Dec 04	Oceanview Elementary School—Whittier, CA	0	35	0
08 Dec 04	08 Dec 04	Washington Middle School—La Habra, CA	0	100	0
09 Dec 04	09 Dec 04	Brownsville Public Library—Brownsville, TX	0	12	0
10 Dec 04	10 Dec 04	Auckland Astronomical Society— Auckland, New Zealand	0	85	0
10 Dec 04	10 Dec 04	Broadneck Elementary School—Arnold, MD	0	125	0
10 Dec 04	10 Dec 04	Mirman School for Gifted Children— Los Angeles, CA	0	8399	0
10 Dec 04	10 Dec 04	North Carolina School for the Deaf—Wilson, NC	0	18	0
10 Dec 04	10 Dec 04	Orange County Astronomers—Orange, CA	0	5300	500
10 Dec 04	10 Dec 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
10 Dec 04	10 Dec 04	University of Hawaii at Hilo—Hilo, HI	0	110	500
10 Dec 04	10 Dec 04	Waterville Valley Ski Academy— Waterville Valley, NH	0	50	0
10 Dec 04	13 Dec 04	Arecibo Observatory—Arecibo, Puerto Rico	0	20	2000
11 Dec 04	11 Dec 04	Coolidge Middle School—Reading, MA	0	30	0
11 Dec 04	11 Dec 04	El Paso Independent School District—El Paso, TX	0	18	0
11 Dec 04	11 Dec 04	Lodge Iguadad Order of the Eastern Star— Sabana Grande, Puerto Rico	0	40	0
11 Dec 04	11 Dec 04	Philadelphia Marriott Downtown— Philadelphia, PA	0	55	0
11 Dec 04	11 Dec 04	St. Mark's School of Texas—Dallas, TX	0	125	0
11 Dec 04	11 Dec 04	Texas Tech University—Lubbock, TX	0	14	0
11 Dec 04	11 Dec 04	Texas Tech University—Lubbock, TX	0	50	0
13 Dec 04	13 Dec 04	"Deseret News"—Salt Lake City, UT	0	67000	0
13 Dec 04	13 Dec 04	Global Foundation, Inc.—Coral Gables, FL	0	120	0
14 Dec 04	14 Dec 04	Hamilton Astronomical Society— Hamilton, New Zealand	0	142	0
14 Dec 04	14 Dec 04	Manatee Community College—Bradenton, FL	0	27	0
14 Dec 04	14 Dec 04	Tucker Valley Elementary/Middle School— Hambleton, WV	0	12	0
14 Dec 04	14 Dec 04	W.M. Keck Observatory—Kamuela, HI	0	50	0
15 Dec 04	15 Dec 04	Diablo View Middle School—Clayton, CA	0	180	0
15 Dec 04	15 Dec 04	Hilo Hawaiian Hotel—Hilo, HI	0	100	0
15 Dec 04	15 Dec 04	Lions Club—Costa Mesa, CA	0	50	0
15 Dec 04	15 Dec 04	The Country School—North Hollywood, CA	0	22	0
16 Dec 04	16 Dec 04	"Night Sky" magazine—Cambridge, MA	0	2050	0
16 Dec 04	16 Dec 04	East Lyme High School—East Lyme, CT	0	30	0
16 Dec 04	16 Dec 04	NASA Ames Research Center—Moffett Field, CA	0	450000	0
16 Dec 04	16 Dec 04	St. Mark's School—Altadena, CA	0	3020	0
17 Dec 04	17 Dec 04	"The Union-Recorder"—Milledgeville, GA	0	8500	0
17 Dec 04	17 Dec 04	Eagle River Nature Center—Eagle River, AK	0	50	0
17 Dec 04	17 Dec 04	Little Thompson Observatory—Berthoud, CO	0	32	0
17 Dec 04	17 Dec 04	Morton College—Cicero, IL	0	11	0
17 Dec 04	17 Dec 04	Roxboro Middle School—Cleveland Heights, OH	0	80	0
17 Dec 04	17 Dec 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
17 Dec 04	17 Dec 04	Tupper Planetarium—Centereach, NY	0	80	0
17 Dec 04	23 Dec 04	"Middletown Times Star" Newspaper— Middletown, CA	0	2000	0
18 Dec 04	18 Dec 04	Tamke-Allan Observatory—Oak Ridge, TN	0	45	1000
20 Dec 04	20 Dec 04	Clover Ridge Elementary School—Chaska, MN	0	30	0

20 Dec 04	20 Dec 04	Morrow Observatory—Bedford, IN	0	10	0
23 Dec 04	23 Dec 04	"Bowie Blade-News"—Bowie, MD	0	50000	0
24 Dec 04	24 Dec 04	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	750000	0
26 Dec 04	26 Dec 04	"Morning Journal"—Lisbon, OH	0	14600	0
26 Dec 04	26 Dec 04	"Vero Beach Press Journal"—Vero Beach, FL	0	40000	0
26 Dec 04	31 Dec 04	Camp Karankawa—Mathis, TX	0	35	0
26 Dec 04	01 Sep 05	Noble Planetarium—Fort Worth, TX	0	42000	0
27 Dec 04	27 Dec 04	"Deseret News"—Salt Lake City, UT	0	67000	0
28 Dec 04	29 Dec 04	Clements Scout Ranch—Athens, TX	0	18	0
29 Dec 04	29 Dec 04	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
31 Dec 04	31 Dec 04	"The Union-Recorder"—Milledgeville, GA	0	8500	0
31 Dec 04	31 Dec 04	Calgary Science Center—Calgary, Canada	0	56	0
31 Dec 04	31 Dec 04	Tularosa Elementary School—Tularosa, NM	0	30000	0
01 Jan 05	01 Jan 05	"Mahoning Valley Parent Magazine"— Youngstown, OH	0	55000	0
01 Jan 05	01 Jan 05	"Sidereal Times" astronomy newsletter— Princeton, NJ	0	125	0
01 Jan 05	01 Jan 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
01 Jan 05	01 Jan 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1000
01 Jan 05	18 Jan 05	Toastmasters—Haddonfield, NJ	0	30	0
01 Jan 05	30 May 05	Noble Planetarium—Fort Worth, TX	0	2000	0
01 Jan 05	31 May 05	Noble Planetarium—Fort Worth, TX	0	12000	0
01 Jan 05	01 Sep 05	Mountain View Elementary School—Elko, NV	0	10	0
01 Jan 05	30 Sep 05	Noble Planetarium—Fort Worth, TX	0	220	0
02 Jan 05	02 Jan 05	"Morning Journal"—Lisbon, OH	0	14600	0
02 Jan 05	02 Jan 05	Community Center—Rough Rock, AZ	0	25	0
03 Jan 05	03 Jan 05	"Longmont Daily Times-Call"—Longmont, CO	0	50000	0
03 Jan 05	03 Jan 05	Fox TV, Channel 40/Vestal—Vestal, NY	0	6502	0
03 Jan 05	24 Jan 05	Pelican Elementary School—Cape Coral, FL	0	540	0
03 Jan 05	31 Jan 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	465	0
03 Jan 05	30 Sep 05	Noble Planetarium—Fort Worth, TX	0	1200	0
04 Jan 05	04 Jan 05	Bismarck High School—Bismarck, ND	0	21	0
04 Jan 05	04 Jan 05	Owatonna Kiwanis Club—Owatonna, MN	0	50	0
04 Jan 05	04 Jan 05	Owego Rotary Club—Owego, NY	0	60	0
04 Jan 05	04 Jan 05	Saturn Observation Campaign Pasadena— Pasadena, CA	0	60	0
04 Jan 05	04 Jan 05	Tupper Planetarium—Centereach, NY	0	99	0
05 Jan 05	05 Jan 05	"Appalachian News-Express"—Pikeville, KY	0	9660	0
05 Jan 05	05 Jan 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
05 Jan 05	05 Jan 05	Northshore Senior Center—Bothell, WA	0	29	0
05 Jan 05	05 Jan 05	Norwich Free Academy Television—Norwich, CT	0	5000	0
05 Jan 05	05 Jan 05	Tupper Planetarium—Centereach, NY	0	176	0
05 Jan 05	06 Jan 05	Bethel Elementary School—Bethel, NC	0	190	0
06 Jan 05	06 Jan 05	Cedar Hall Elementary—Evansville, IN	0	40	0
06 Jan 05	06 Jan 05	Museum of Science and Industry—Tampa, FL	0	12	0
06 Jan 05	06 Jan 05	Oak Grove Elementary School—Bloomington, MN	0	70	0
06 Jan 05	06 Jan 05	Owatonna Public Library—Owatonna, MN	0	22	0
06 Jan 05	01 Aug 05	Apple Store—Chicago, IL	0	850	0
07 Jan 05	07 Jan 05	Coyote Valley Elementary School— Middletown, CA	0	30	0
07 Jan 05	07 Jan 05	Eagle River Nature Center—Eagle River, AK	0	77	0
07 Jan 05	07 Jan 05	Tularosa Elementary School—Tularosa, NM	0	30000	0
07 Jan 05	07 Jan 05	Tupper Planetarium—Centereach, NY	0	196	0
08 Jan 05	08 Jan 05	Butler University—Indianapolis, IN	0	53	0
08 Jan 05	08 Jan 05	Lakewood Methodist Church—Lakewood, OH	0	35	0
08 Jan 05	08 Jan 05	Science Factory Children's Museum—Eugene, OR	0	30	0
09 Jan 05	09 Jan 05	"Morning Journal"—Lisbon, OH	0	14600	0
09 Jan 05	09 Jan 05	Science Factory Children's Museum—Eugene, OR	0	41	0
10 Jan 05	10 Jan 05	"Roane County News"—Rockwood, TN	0	4000	0
10 Jan 05	10 Jan 05	Freeport McMoRan Daily Living Science Center— Kenner, LA	0	74	0
10 Jan 05	10 Jan 05	Grace Methodist Church—Fergus Falls, MN	0	21	0
10 Jan 05	10 Jan 05	Lakewood High School—Lakewood, OH	0	40	0
10 Jan 05	21 Jan 05	Pelican Elementary School—Cape Coral, FL	0	540	0
11 Jan 05	11 Jan 05	Blake Planetarium—Plymouth, MA	0	40	0
11 Jan 05	11 Jan 05	Cooperstown Central School—Cooperstown, NY	0	25	0

11 Jan 05	11 Jan 05	KDTN-TV, Channel 2/Dallas—Dallas, TX	0	42	0
11 Jan 05	11 Jan 05	McEachron Elementary School—Topeka, KS	0	46	0
11 Jan 05	11 Jan 05	Tupper Planetarium—Centereach, NY	0	80	0
12 Jan 05	12 Jan 05	Norwich Free Academy Television—Norwich, CT	0	5000	0
12 Jan 05	12 Jan 05	Tupper Planetarium—Centereach, NY	0	90	0
12 Jan 05	14 Jan 05	Austin High School—El Paso, TX	0	110	0
12 Jan 05	15 Feb 05	Public Access Cable in Orange County—Irvine, CA	0	400000	1000
12 Jan 05	31 Mar 05	Georgia Southern University—Statesboro, GA	0	1856	0
13 Jan 05	13 Jan 05	Eastbay Astronomical Society—Oakland, CA	0	60	0
13 Jan 05	13 Jan 05	Hoover Middle School—Albuquerque, NM	0	30	0
13 Jan 05	13 Jan 05	Lucio Middle School—Brownsville, TX	0	20	0
13 Jan 05	13 Jan 05	Manasota Fossil Club—Sarasota, FL	0	24	0
13 Jan 05	13 Jan 05	Mystic Scenic Studios—Dedham, MA	0	50000	0
13 Jan 05	13 Jan 05	San Jose State University—San Jose, CA	0	90	0
13 Jan 05	13 Jan 05	St. Bernadette School—Houma, LA	0	48	0
13 Jan 05	13 Jan 05	Sun Newspapers—North Olmsted, OH	0	8500	0
13 Jan 05	13 Jan 05	Texas Tech University—Lubbock, TX	0	20	0
13 Jan 05	13 Jan 05	Thomas Crane Public Library—Quincy, MA	0	6	0
13 Jan 05	13 Jan 05	Tupper Planetarium—Centereach, NY	0	113	0
13 Jan 05	13 Jan 05	Valencia Planetarium—Valencia, Spain	0	12	0
13 Jan 05	13 Jan 05	Woodland Dunes Nature Center—Two Rivers, WI	0	50	0
14 Jan 05	14 Jan 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
14 Jan 05	14 Jan 05	Grayson County High School—Leitchfield, KY	0	300	0
14 Jan 05	14 Jan 05	Lamar Elementary School—Midland, TX	0	25	0
14 Jan 05	14 Jan 05	Maywood Environmental Park—Sheboygan, WI	0	50000	0
14 Jan 05	14 Jan 05	Mirman School for Gifted Children— Los Angeles, CA	0	8399	0
14 Jan 05	14 Jan 05	Oracle Corporation—Redwood Shores, CA	0	46	0
14 Jan 05	14 Jan 05	Pacific Science Center—Seattle, WA	0	134	0
14 Jan 05	14 Jan 05	Pennsylvania State University, Abington— Abington, PA	0	330	0
14 Jan 05	14 Jan 05	St. Augustine High School—St. Augustine, FL	0	26	0
14 Jan 05	14 Jan 05	WSPD Radio, 1370 AM/Toledo—Toledo, OH	0	75000	0
15 Jan 05	15 Jan 05	Buffalo Museum of Science—Buffalo, NY	0	23	0
15 Jan 05	15 Jan 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	15	0
15 Jan 05	15 Jan 05	Museum of Flight—Seattle, WA	0	15	0
15 Jan 05	15 Jan 05	Paso Robles Library—Paso Robles, CA	0	85	0
15 Jan 05	15 Jan 05	Science Factory Children's Museum—Eugene, OR	0	61	0
15 Jan 05	15 Jan 05	Tamke-Allan Observatory—Oak Ridge, TN	0	40	1000
15 Jan 05	15 Jan 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	100000
16 Jan 05	16 Jan 05	"Morning Journal"—Lisbon, OH	0	14600	0
16 Jan 05	16 Jan 05	Discovery Science Center—Santa Ana, CA	0	90	0
16 Jan 05	16 Jan 05	Science Factory Children's Museum—Eugene, OR	0	40	0
17 Jan 05	17 Jan 05	Black Hills Astronomical Society—Rapid City, SD	0	21	0
17 Jan 05	17 Jan 05	Morrow Observatory—Bedford, IN	0	14	0
18 Jan 05	18 Jan 05	"Columbus Dispatch"—Columbus, OH	0	163000	0
18 Jan 05	18 Jan 05	Camp Pendleton Marine Corps Base— Oceanside, CA	0	100	0
18 Jan 05	18 Jan 05	Common Threads Montessori—Santa Cruz, CA	0	36	0
18 Jan 05	18 Jan 05	Georgia College & State University— Milledgeville, GA	0	10	0
18 Jan 05	18 Jan 05	Norwich Free Academy Television—Norwich, CT	0	5000	0
18 Jan 05	18 Jan 05	Rotary Club of Tempe—Tempe, AZ	0	75	0
18 Jan 05	18 Jan 05	Samford University—Birmingham, AL	0	45	0
18 Jan 05	18 Jan 05	Tupper Planetarium—Centereach, NY	0	80	0
18 Jan 05	21 Jan 05	Northrop High School—Fort Wayne, IN	0	80	0
19 Jan 05	19 Jan 05	"Arkansas Times"—Piggott, AR	0	60000	0
19 Jan 05	19 Jan 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
19 Jan 05	19 Jan 05	St. Johns County Libraries—St. Augustine, FL	0	55	0
19 Jan 05	19 Jan 05	Tupper Planetarium—Centereach, NY	0	176	0
20 Jan 05	20 Jan 05	Bennett College—Greensboro, NC	0	180	0
20 Jan 05	20 Jan 05	Brownsville Public Library—Brownsville, TX	0	15	0
20 Jan 05	20 Jan 05	Eastbay Astronomical Society—Oakland, CA	0	85	0
20 Jan 05	20 Jan 05	Eastern Michigan University—Ypsilanti, MI	0	60	0
20 Jan 05	20 Jan 05	Japanese Planetarium—Tokyo, Japan	0	47	0
20 Jan 05	20 Jan 05	Morton College—Cicero, IL	0	11	0

20 Jan 05	20 Jan 05	Rosemont Park District Leisure Center— Rosemont, IL	0	12	0
20 Jan 05	20 Jan 05	Thomas Crane Public Library—Quincy, MA	0	17	0
20 Jan 05	20 Jan 05	Tupper Planetarium—Centereach, NY	0	102	0
20 Jan 05	20 Jan 05	Wayland Middle School—Wayland, MA	0	25	0
20 Jan 05	28 Jan 05	Austin High School—El Paso, TX	0	10	0
20 Jan 05	20 Feb 05	Wisconsin Science Network—DeForest, WI	0	1500	0
21 Jan 05	21 Jan 05	Academia La Milagrosa—Cayey, Puerto Rico	0	250	0
21 Jan 05	21 Jan 05	Arizona State University—Tempe, AZ	0	12	0
21 Jan 05	21 Jan 05	Countryside Elementary Science Extravaganza— Edina, MN	0	50	0
21 Jan 05	21 Jan 05	Cuyahoga Valley Environmental Education Center—Peninsula, OH	0	65	0
21 Jan 05	21 Jan 05	Dobbs Elementary School—Rockwall, TX	0	95	0
21 Jan 05	21 Jan 05	Eagle River Nature Center—Eagle River, AK	0	40	0
21 Jan 05	21 Jan 05	Indian Head Senior/Community Center— Indian Head, MD	0	25	0
21 Jan 05	21 Jan 05	Longfellow School—Brunswick, ME	0	65	0
21 Jan 05	21 Jan 05	St. Matthew School—Akron, OH	0	50	0
21 Jan 05	21 Jan 05	The Union Institute & University—Cincinnati, OH	0	60	0
21 Jan 05	21 Jan 05	Tupper Planetarium—Centereach, NY	0	80	0
21 Jan 05	21 Jan 05	Tupper Planetarium—Centereach, NY	0	193	0
21 Jan 05	21 Jan 05	University of Hawaii at Hilo—Hilo, HI	0	150	600
21 Jan 05	21 Jan 05	Wellcome Middle School—Greenville, NC	0	148	0
21 Jan 05	22 Jan 05	Ward Beecher Planetarium—Youngstown, OH	0	90	0
22 Jan 05	22 Jan 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
22 Jan 05	22 Jan 05	La Sierra University—Riverside, CA	0	80	0
22 Jan 05	22 Jan 05	Lane Planetarium—Eugene, OR	0	35	0
22 Jan 05	22 Jan 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	4	0
22 Jan 05	22 Jan 05	Science Factory Children's Museum—Eugene, OR	0	76	0
22 Jan 05	22 Jan 05	Trumbull School—Chicago, IL	0	100	0
22 Jan 05	20 Mar 05	Museum of Science and History—Jacksonville, FL	0	3200	0
23 Jan 05	23 Jan 05	"The Post-Journal"—Jamestown, NY	0	30000	0
23 Jan 05	23 Jan 05	Lane Planetarium—Eugene, OR	0	30	0
23 Jan 05	23 Jan 05	Prince Kuhio Mall—Hilo, HI	0	3000	0
23 Jan 05	23 Jan 05	Prince Kuhio Mall—Hilo, HI	0	5000	0
23 Jan 05	23 Jan 05	Science Factory Children's Museum—Eugene, OR	0	13	0
24 Jan 05	24 Jan 05	"Vero Beach Press Journal"—Vero Beach, FL	0	40000	0
24 Jan 05	24 Jan 05	Arkansas Oklahoma Astronomical Society— Van Buren, AR	0	600	0
24 Jan 05	24 Jan 05	Civil Air Patrol TX 215—El Paso, TX	0	12	0
24 Jan 05	24 Jan 05	Hermosa Elementary School—Artesia, NM	0	89	0
24 Jan 05	24 Jan 05	Longfellow School—Brunswick, ME	0	65	0
24 Jan 05	24 Jan 05	R.B. Hunt Elementary School—St. Augustine, FL	0	33	0
24 Jan 05	24 Jan 05	Waterford School District—Waterford, MI	0	107	0
24 Jan 05	24 Jan 05	WYPR Radio, 88.1 FM/Baltimore—Baltimore, MD	0	300000	0
24 Jan 05	04 Feb 05	Northrop High School—Fort Wayne, IN	0	80	0
24 Jan 05	30 Sep 05	WYPR Radio, 88.1 FM/Baltimore—Baltimore, MD	0	0	300000
25 Jan 05	25 Jan 05	Barnard-Seyfert Astronomical Society— Nashville, TN	0	135	0
25 Jan 05	25 Jan 05	Grange Middle School—Fairfield, CA	0	35	0
25 Jan 05	25 Jan 05	Treasure Coast Astronomical Society— Port St. Lucie, FL	0	32	0
26 Jan 05	26 Jan 05	Hamburg Natural Historical Society— Hamburg, NY	0	48	0
26 Jan 05	26 Jan 05	Harper Elementary School—Evansville, IN	0	25	0
26 Jan 05	26 Jan 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
26 Jan 05	26 Jan 05	Maple Junior High School—Chicago, IL	0	155	0
26 Jan 05	26 Jan 05	Norwich Free Academy Television—Norwich, CT	0	5000	0
26 Jan 05	26 Jan 05	Tupper Planetarium—Centereach, NY	0	90	0
26 Jan 05	26 Jan 05	University of Hawaii at Hilo—Hilo, HI	0	600	0
26 Jan 05	26 Jan 05	Westwood Elementary School—Bloomington, MN	0	78	0
27 Jan 05	27 Jan 05	Arkansas Oklahoma Astronomical Society— Van Buren, AR	0	77	0
27 Jan 05	27 Jan 05	Cornell Cooperative Extension—Jamestown, NY	0	10	0
27 Jan 05	27 Jan 05	Dunkirk "Observer"—Dunkirk, NY	0	15000	0
27 Jan 05	27 Jan 05	Einstein Academy—Elgin, IL	0	72	0

27 Jan 05	27 Jan 05	Milken Community High School—Los Angeles, CA	0	9	0
27 Jan 05	27 Jan 05	Tupper Planetarium—Centereach, NY	0	113	0
28 Jan 05	28 Jan 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
28 Jan 05	28 Jan 05	Bessie Kinsner Elementary School— Strongsville, OH	0	100	0
28 Jan 05	28 Jan 05	Bridge Point Elementary School—Austin, TX	0	52	0
28 Jan 05	28 Jan 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	13	0
28 Jan 05	28 Jan 05	Environmental Studies Center—Mobile, AL	0	60	0
28 Jan 05	28 Jan 05	Highland Road Park Observatory— Baton Rouge, LA	0	57	0
28 Jan 05	28 Jan 05	Lawrence Elementary School—Lawrenceville, NJ	0	400	0
28 Jan 05	28 Jan 05	Putnam Elementary School—Fort Collins, CO	0	100	0
28 Jan 05	28 Jan 05	Richland College Planetarium—Dallas, TX	0	130	0
28 Jan 05	28 Jan 05	St. Petersburg Astronomy Club— St. Petersburg, FL	0	71	0
28 Jan 05	28 Jan 05	Stuart Burns Elementary School—Burns, TN	0	200	0
28 Jan 05	28 Jan 05	Tobin Elementary School—Cambridge, MA	0	100	0
28 Jan 05	30 Jan 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	12816	0
29 Jan 05	29 Jan 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
29 Jan 05	29 Jan 05	Mary Muth Interpretive Center— Newport Beach, CA	0	100	0
29 Jan 05	29 Jan 05	Museum of Flight—Seattle, WA	0	19	0
29 Jan 05	29 Jan 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	30	15
29 Jan 05	29 Jan 05	Northeastern Oklahoma State University— Tahlequah, OK	0	25	0
29 Jan 05	29 Jan 05	Science Factory Children's Museum—Eugene, OR	0	37	0
29 Jan 05	29 Jan 05	University of Hawaii at Hilo—Hilo, HI	0	1500	0
29 Jan 05	30 Jan 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	40000	0
30 Jan 05	30 Jan 05	"Morning Journal"—Lisbon, OH	0	14600	0
30 Jan 05	30 Jan 05	Onizuka Space Center—Kailua-Kona, HI	0	1000	0
30 Jan 05	30 Jan 05	Science Factory Children's Museum—Eugene, OR	0	16	0
31 Jan 05	31 Jan 05	All Girls Academy—Des Plaines, IL	0	180	0
31 Jan 05	31 Jan 05	Darwin R. Barker Library—Fredonis, NY	0	15	0
31 Jan 05	31 Jan 05	International Storytelling Center— Jonesborough, TN	0	35	0
31 Jan 05	31 Jan 05	Waimea Middle School—Waimea, HI	0	300	0
31 Jan 05	31 Jan 05	Watkins Mill High School—Gaithersburg, MD	0	10	0
01 Feb 05	01 Feb 05	Dugway Elementary School—Dugway, UT	0	96	0
01 Feb 05	01 Feb 05	Girl Scouts—Chicago, IL	0	90	0
01 Feb 05	01 Feb 05	Redeemer Lutheran Church—Marquette, MI	0	20	0
01 Feb 05	01 Feb 05	Sunrise Elementary Community Presenter's Night—Spokane Valley, WA	0	103	0
01 Feb 05	01 Feb 05	Tulare Sunrise Rotary—Tulare, CA	0	17	0
01 Feb 05	08 Feb 05	Pelican Elementary School—Cape Coral, FL	0	360	0
01 Feb 05	28 Feb 05	BaltiCon SciFi Convention—Baltimore, MD	0	60	0
01 Feb 05	28 Feb 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	471	0
01 Feb 05	31 Mar 05	Up Close and Personal in Tucker—Tucker, GA	0	25000	0
01 Feb 05	27 Jul 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	1999	0
02 Feb 05	02 Feb 05	Chicago Astronomical Society—Chicago, IL	0	15	0
02 Feb 05	02 Feb 05	Texas A&M University—College Station, TX	0	70	0
02 Feb 05	04 Feb 05	Rio Vista Elementary School—San Bernardino, CA	0	300	0
02 Feb 05	12 Feb 05	Prince Kuhio Mall—Hilo, HI	0	1000	0
03 Feb 05	03 Feb 05	"Bowie Blade-News"—Bowie, MD	0	50000	0
03 Feb 05	03 Feb 05	Lucio Middle School—Brownsville, TX	0	22	0
03 Feb 05	03 Feb 05	Oskaloosa High School—Oskaloosa, IA	0	77	0
03 Feb 05	03 Feb 05	St. Angela School—Fairview Park, OH	0	55	0
03 Feb 05	03 Feb 05	West Indianola Elementary School—Topeka, KS	0	40	0
03 Feb 05	04 Feb 05	Leota Junior High School—Woodinville, WA	0	220	0
03 Feb 05	05 Feb 05	NASA Johnson Space Center—Houston, TX	0	18	0
03 Feb 05	05 Feb 05	NASA Johnson Space Center—Houston, TX	0	110	0
04 Feb 05	04 Feb 05	Condit Exhibits—Denver, CO	0	21	0
04 Feb 05	04 Feb 05	Dudley Middle School—Dudley, MA	0	56	0

04 Feb 05	04 Feb 05	Eagle River Nature Center—Eagle River, AK	0	40	0
04 Feb 05	04 Feb 05	East Elementary School—Tooele, UT	0	101	0
04 Feb 05	04 Feb 05	Hoosier Association of Science Teachers— Indianapolis, IN	0	40	0
05 Feb 05	05 Feb 05	Gulf Middle School—New Port Richey, FL	0	300	0
05 Feb 05	05 Feb 05	Lakeland School District—Rathdrum, ID	0	175	0
05 Feb 05	05 Feb 05	Mary Ann Mongan Library—Covington, KY	0	35	0
05 Feb 05	05 Feb 05	Punta Aguila Resort—Cabo Rojo, Puerto Rico	0	200	0
05 Feb 05	05 Feb 05	Science Factory Children's Museum—Eugene, OR	0	32	0
05 Feb 05	05 Feb 05	Tamke-Allan Observatory—Oak Ridge, TN	0	50	1000
05 Feb 05	05 Feb 05	Walnut Creek Inn—Des Moines, IA	0	82	0
05 Feb 05	28 Feb 05	Hyatt Regency Maui—Lahaina, HI	0	462	0
05 Feb 05	19 Mar 05	Cincinnati Museum Center—Cincinnati, OH	0	1000	0
06 Feb 05	06 Feb 05	Science Factory Children's Museum—Eugene, OR	0	15	0
06 Feb 05	18 Feb 05	West Knox Elementary School—Corbin, KY	0	580	0
07 Feb 05	07 Feb 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
07 Feb 05	07 Feb 05	Normandale Hills—Bloomington, MN	0	75	0
07 Feb 05	07 Feb 05	North Boone High School—Poplar Grove, IL	0	126	0
07 Feb 05	07 Feb 05	Suffolk County Community College—Selden, NY	0	1500	1000
08 Feb 05	08 Feb 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	40	0
08 Feb 05	08 Feb 05	Chenango Valley Stargazers Association, Inc.— Greene, NY	0	25	0
08 Feb 05	08 Feb 05	East Palo Alto Elementary School— East Palo Alto, CA	0	97	0
08 Feb 05	08 Feb 05	Enterprise Elementary School—Enterprise, UT	0	37	0
08 Feb 05	08 Feb 05	Georgia Southwestern State University— Americus, GA	0	38	0
08 Feb 05	08 Feb 05	Koelbel Public Library—Centennial, CO	0	60	0
08 Feb 05	08 Feb 05	Mark Sylvestre Planetarium—Plymouth, NH	0	27	0
08 Feb 05	08 Feb 05	Prince George's Community College—Largo, MD	0	40	0
08 Feb 05	08 Feb 05	Princeton University—Princeton, NJ	0	75	0
08 Feb 05	08 Feb 05	Toastmasters—Haddonfield, NJ	0	30	0
09 Feb 05	09 Feb 05	Adelphia Cable-Crossroads Community Forum— Buffalo, NY	0	500	0
09 Feb 05	09 Feb 05	Classroom Connect—Brisbane, CA	0	22	0
09 Feb 05	09 Feb 05	Curtis High School—Staten Island, NY	0	28	0
09 Feb 05	09 Feb 05	Massachusetts Association of Science Teachers— Worcester, MA	0	40	0
09 Feb 05	09 Feb 05	Norwich Free Academy Television—Norwich, CT	0	5000	0
09 Feb 05	09 Feb 05	St. Mark's School of Texas—Dallas, TX	0	500	0
10 Feb 05	10 Feb 05	Ben D. Quinn Elementary School—New Bern, NC	0	64	0
10 Feb 05	10 Feb 05	Camden Junior High School—Camden, TN	0	150	0
10 Feb 05	10 Feb 05	Emily Dickinson Elementary School— Redmond, WA	0	150	0
10 Feb 05	10 Feb 05	Environmental Studies Center—Mobile, AL	0	70	0
10 Feb 05	10 Feb 05	Indian Springs High School—Indian Springs, AL	0	15	0
10 Feb 05	10 Feb 05	Lynnwood Intermediate School—Lynnwood, WA	0	54	0
10 Feb 05	10 Feb 05	Peck Farm Park—Geneva, IL	0	23	0
10 Feb 05	10 Feb 05	Salt Lake County Library—West Valley City, UT	0	50	0
10 Feb 05	10 Feb 05	St. Timothy United Methodist Church School— Stone Mountain, GA	0	200	0
10 Feb 05	10 Feb 05	University of Rochester—Rochester, NY	0	85	0
10 Feb 05	15 Feb 05	Creamers Field Waterfowl Refuge—Fairbanks, AK	0	150	0
11 Feb 05	11 Feb 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
11 Feb 05	11 Feb 05	Beachwalk Home Owners Association— Huntington Beach, CA	0	60	0
11 Feb 05	11 Feb 05	Boise Astronomical Society—Boise, ID	0	61	0
11 Feb 05	11 Feb 05	Capricorn Science Fiction Convention— Arlington Heights, IL	0	42	0
11 Feb 05	11 Feb 05	Hillman Middle School—Youngstown, OH	0	80	0
11 Feb 05	11 Feb 05	Mirman School for Gifted Children— Los Angeles, CA	0	8399	0
11 Feb 05	11 Feb 05	Novins Planetarium—Toms River, NJ	0	12050	0
11 Feb 05	11 Feb 05	St. Augustine High School—St. Augustine, FL	0	24	0
11 Feb 05	11 Feb 05	Temple Intermediate School—Rosemead, CA	0	421	0
11 Feb 05	11 Feb 05	University of Hawaii at Hilo—Hilo, HI	0	80	0

12 Feb 05	12 Feb 05	Capricon Science Fiction Convention— Arlington Heights, IL	0	50	0
12 Feb 05	12 Feb 05	Cochise Community College—Tucson, AZ	0	60	0
12 Feb 05	12 Feb 05	Hallstrom Planetarium—Fort Pierce, FL	0	350	0
12 Feb 05	12 Feb 05	Lockwood Park Observatory—Rockford, IL	0	15	0
12 Feb 05	12 Feb 05	Magic Valley Astronomical Society— Twin Falls, ID	0	29	0
12 Feb 05	12 Feb 05	Reuben H. Fleet Science Center—San Diego, CA	0	100	0
12 Feb 05	12 Feb 05	Science Factory Children's Museum— Eugene, OR	0	29	0
12 Feb 05	12 Feb 05	Skyline Wilderness Park—Napa, CA	0	22	0
12 Feb 05	12 Feb 05	University of Hawaii at Hilo—Hilo, HI	0	15	0
13 Feb 05	13 Feb 05	Lancaster County Public Library—Kilmarnock, VA	0	65	0
13 Feb 05	13 Feb 05	Science Factory Children's Museum—Eugene, OR	0	17	0
13 Feb 05	14 Feb 05	Museum of Science and History— Jacksonville, FL	0	3000	0
14 Feb 05	14 Feb 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	39	0
14 Feb 05	14 Feb 05	Cloverleaf Middle School—Lodi, OH	0	15	0
14 Feb 05	14 Feb 05	Tupper Planetarium—Centereach, NY	0	122	0
15 Feb 05	15 Feb 05	Framingham State College—Framingham, MA	0	8	0
15 Feb 05	15 Feb 05	Genoa Middle School—Westerville, OH	0	325	0
15 Feb 05	15 Feb 05	Oaks Road Elementary School—New Bern, NC	0	93	0
15 Feb 05	15 Feb 05	St. Mary's School—Owatonna, MN	0	37	0
15 Feb 05	15 Feb 05	The Palms Retirement Community— Fort Myers, FL	0	41	0
15 Feb 05	15 Feb 05	Tupper Planetarium—Centereach, NY	0	80	0
15 Feb 05	15 Feb 05	University of Texas at Austin—Austin, TX	0	40	0
15 Feb 05	15 Feb 05	Willow Brook High School—Oak Ridge, TN	0	400	12000
15 Feb 05	16 Feb 05	Pelican Elementary School—Cape Coral, FL	0	30	0
15 Feb 05	26 Feb 05	SciWorks Museum—Winston-Salem, NC	0	74820	0
15 Feb 05	30 Sep 05	Georgia Southern University—Statesboro, GA	0	1000	0
16 Feb 05	16 Feb 05	Chester County Intermediate Unit— Downingtown, PA	0	64	0
16 Feb 05	16 Feb 05	Harvest Middle School—Napa, CA	0	26	0
16 Feb 05	16 Feb 05	Harvest Middle School—Napa, CA	0	29	0
16 Feb 05	16 Feb 05	Harvest Middle School—Napa, CA	0	33	0
16 Feb 05	16 Feb 05	Mission Trails Regional Park—San Diego, CA	0	51	0
16 Feb 05	16 Feb 05	P.S. 32 The Gifford School—Staten Island, NY	0	176	0
16 Feb 05	16 Feb 05	Seth Paine Elementary School—Lake Zurich, IL	0	75	0
16 Feb 05	16 Feb 05	Starburst Meadows Observatory—Brunswick, ME	0	30	0
16 Feb 05	16 Feb 05	Tupper Planetarium—Centereach, NY	0	90	0
16 Feb 05	16 Feb 05	Washington High School—Washington, NC	0	47	0
16 Feb 05	16 Feb 05	Winston-Salem Forsyth County Schools— Winston-Salem, NC	0	20	0
16 Feb 05	16 Feb 05	Wyncote Elementary School—Wyncote, PA	0	120	0
17 Feb 05	17 Feb 05	Brownsville Public Library—Brownsville, TX	0	13	0
17 Feb 05	17 Feb 05	Falconer Rotary Club—Falconer, NY	0	19	0
17 Feb 05	17 Feb 05	Florida Memorial College—Miami, FL	0	32	0
17 Feb 05	17 Feb 05	Hyatt Observatory—Lahaina, HI	0	18	0
17 Feb 05	17 Feb 05	Morton College—Cicero, IL	0	15	0
17 Feb 05	17 Feb 05	Raleigh Astronomy Club—Raleigh, NC	0	40	0
17 Feb 05	17 Feb 05	Rochester Public Library—Rochester, IL	0	15	0
17 Feb 05	17 Feb 05	Tupper Planetarium—Centereach, NY	0	113	0
17 Feb 05	17 Feb 05	Wayside Cafe—Akron, OH	0	22	0
17 Feb 05	17 Feb 05	West Chester University—West Chester, PA	0	65	0
17 Feb 05	18 Mar 05	Harriet Tubman Elementary School—Dolton, IL	0	12	0
18 Feb 05	18 Feb 05	Comanche Elementary School—Albuquerque, NM	0	50	0
18 Feb 05	18 Feb 05	Greentree Elementary School—Irvine, CA	0	212	0
18 Feb 05	18 Feb 05	Hillsdale Academy—Hillsdale, MI	0	78	0
18 Feb 05	18 Feb 05	Pegasus Starship Restaurant—Italy, TX	0	37	0
18 Feb 05	18 Feb 05	Tupper Planetarium—Centereach, NY	0	80	0
18 Feb 05	18 Feb 05	University of Hawaii at Hilo—Hilo, HI	0	80	0
19 Feb 05	19 Feb 05	Cranbrook Institute of Science— Bloomfield Hills, MI	0	3300	0
19 Feb 05	19 Feb 05	Dillard Drive Elementary School—Apex, NC	0	200	0
19 Feb 05	19 Feb 05	Empire Mall—Sioux Falls, SD	0	960	0
19 Feb 05	19 Feb 05	Humboldt State University—Arcata, CA	0	8200	0

19 Feb 05	19 Feb 05	Science Factory Children's Museum— Eugene, OR	0	43	0
19 Feb 05	19 Feb 05	St. Augustine High School—St. Augustine, FL	0	17	0
19 Feb 05	19 Feb 05	Tamke-Allan Observatory—Oak Ridge, TN	0	60	1000
20 Feb 05	20 Feb 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	144	0
20 Feb 05	20 Feb 05	Science Factory Children's Museum—Eugene, OR	0	23	0
21 Feb 05	21 Feb 05	Austin High School—El Paso, TX	0	44	0
21 Feb 05	21 Feb 05	Environmental Studies Center—Mobile, AL	0	50	0
21 Feb 05	21 Feb 05	Morrow Observatory—Bedford, IN	0	10	0
21 Feb 05	21 Feb 05	National Optical Astronomy Observatory— Tucson, AZ	0	24	0
21 Feb 05	21 Feb 05	Sebring Civil Air Patrol—Sebring, FL	0	25	0
22 Feb 05	22 Feb 05	Barnes & Noble Bookstore—Winston-Salem, NC	0	40	0
22 Feb 05	22 Feb 05	Radisson Hotel—Pewaukee, WI	0	90	0
22 Feb 05	22 Feb 05	Sunnydale Elementary School—Streamwood, IL	0	22	0
22 Feb 05	22 Feb 05	The Palms Retirement Community— Fort Myers, FL	0	20	0
22 Feb 05	22 Feb 05	Tony Roma's Restaurant—Danville, CA	0	150	0
23 Feb 05	23 Feb 05	Buffalo Museum of Science—Buffalo, NY	0	17	0
23 Feb 05	23 Feb 05	Buffalo Museum of Science—Buffalo, NY	0	22	0
23 Feb 05	23 Feb 05	Fuller Elementary School—Cary, NC	0	300	0
23 Feb 05	23 Feb 05	Paso Robles High School—Paso Robles, CA	0	90	0
23 Feb 05	23 Feb 05	Saddleback College Astronomy Club— Mission Viejo, CA	0	35	0
23 Feb 05	23 Feb 05	Stanislaus County Office of Education— Modesto, CA	0	17	0
23 Feb 05	23 Feb 05	Starburst Meadows Observatory—Brunswick, ME	0	30	0
24 Feb 05	24 Feb 05	Adams Elementary School—Spokane, WA	0	161	0
24 Feb 05	24 Feb 05	Bruneau Dunes Observatory— Mountain Home, ID	0	32	0
24 Feb 05	24 Feb 05	Dunkirk "Observer"—Dunkirk, NY	0	15000	0
24 Feb 05	24 Feb 05	Northcountry Planetarium—Plattsburgh, NY	0	16	0
24 Feb 05	24 Feb 05	Ohlone College, Newark Campus—Newark, CA	0	15	0
24 Feb 05	24 Feb 05	Pilot Club of Holton—Holton, KS	0	40	0
24 Feb 05	24 Feb 05	Springfield Science Museum—Springfield, MA	0	200	0
24 Feb 05	24 Feb 05	Valley Elementary School—Pelham, AL	0	120	0
24 Feb 05	24 Feb 05	Vernon Elementary School—Tooele, UT	0	31	0
25 Feb 05	25 Feb 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
25 Feb 05	25 Feb 05	Camp Abalufa—Fort Pierce, FL	0	200	0
25 Feb 05	25 Feb 05	Classroom Connect—Brisbane, CA	0	22	0
25 Feb 05	25 Feb 05	Greenville Mathematics & Science Regional Center—Clemson, SC	0	65	0
25 Feb 05	25 Feb 05	New Roads School—Santa Monica, CA	0	11	0
25 Feb 05	25 Feb 05	Peggy Notebaert Nature Museum—Chicago, IL	0	80	0
25 Feb 05	25 Feb 05	Sycamore Canyon Elementary School— Newbury Park, CA	0	22	0
25 Feb 05	25 Feb 05	University of Colorado, Boulder—Boulder, CO	0	12	0
25 Feb 05	25 Feb 05	Whitley City Schools—Whitley City, KY	0	150	0
26 Feb 05	26 Feb 05	Andrews Independent School District Planetarium—Andrews, TX	0	61	0
26 Feb 05	26 Feb 05	Derby Cub Scouts—Derby, KS	0	200	0
26 Feb 05	26 Feb 05	Maui Community College— Kaahumanu-Kahului, HI	0	16	0
26 Feb 05	26 Feb 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	4	0
26 Feb 05	26 Feb 05	Science Factory Children's Museum—Eugene, OR	0	19	0
26 Feb 05	26 Feb 05	St. Mark's School of Texas—Dallas, TX	0	125	0
26 Feb 05	26 Feb 05	University of Chicago Laboratory Schools— Chicago, IL	0	12	0
28 Feb 05	28 Feb 05	Common Threads Montessori—Santa Cruz, CA	0	37	0
28 Feb 05	28 Feb 05	Environmental Studies Center—Mobile, AL	0	60	0
28 Feb 05	28 Feb 05	Washington Middle School—La Habra, CA	0	300	0
28 Feb 05	28 Feb 05	YMCA of Jamestown—Jamestown, NY	0	10	0
28 Feb 05	01 Mar 05	Illinois Technology Conference for Educators— Pheasant Run, IL	0	1200	0
01 Mar 05	01 Mar 05	Holy Name School—Topeka, KS	0	19	0
01 Mar 05	01 Mar 05	Samford University—Birmingham, AL	0	15	0

01 Mar 05	31 Mar 05	BaltiCon SciFi Convention—Baltimore, MD	0	25	0
01 Mar 05	31 Mar 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	774	0
01 Mar 05	31 Mar 05	Hyatt Regency Maui—Lahaina, HI	0	521	0
02 Mar 05	02 Mar 05	Lorain Community College—Lorain, OH	0	32	0
02 Mar 05	04 Mar 05	Rio Vista Elementary School—San Bernardino, CA	0	350	0
02 Mar 05	05 Mar 05	St. Mark's School of Texas—Dallas, TX	0	950	0
03 Mar 05	03 Mar 05	Arlis's Restaurant—Bellingham, WA	0	20	0
03 Mar 05	03 Mar 05	Avondale Middle School—Avondale, AZ	0	220	0
03 Mar 05	03 Mar 05	Holy Name School—Topeka, KS	0	39	0
03 Mar 05	03 Mar 05	Jordan School District—West Jordan, UT	0	24	0
03 Mar 05	03 Mar 05	Little Babe's Restaurant—Mukwonago, WI	0	29	0
03 Mar 05	03 Mar 05	Macey's Little Theatre—West Jordan, UT	0	10	0
03 Mar 05	03 Mar 05	Museum of Science and Industry—Tampa, FL	0	8	0
03 Mar 05	03 Mar 05	O'Conner Senior Center—Knoxville, TN	0	100	0
03 Mar 05	03 Mar 05	Ohlone College, Newark Campus—Newark, CA	0	20	0
03 Mar 05	03 Mar 05	Owatonna Public Library—Owatonna, MN	0	25	0
03 Mar 05	03 Mar 05	Tupper Planetarium—Centereach, NY	0	192	0
04 Mar 05	04 Mar 05	Eagle River Nature Center—Eagle River, AK	0	14	0
04 Mar 05	04 Mar 05	Science Museum of Minnesota—St. Paul, MN	0	30	0
04 Mar 05	04 Mar 05	Tupper Planetarium—Centereach, NY	0	50	0
04 Mar 05	04 Mar 05	Upper Freehold Regional Elementary/Middle School—Allentown, NJ	0	90	0
04 Mar 05	04 Mar 05	WFAD Radio, 1490 AM/Middlebury— Middlebury, VT	0	13000	0
04 Mar 05	04 Mar 05	Winston-Salem Forsyth County Schools— Winston-Salem, NC	0	700	0
05 Mar 05	05 Mar 05	Arizona State University—Tempe, AZ	0	1500	0
05 Mar 05	05 Mar 05	Arizona State University—Tempe, AZ	0	1600	0
05 Mar 05	05 Mar 05	Arizona State University—Tempe, AZ	0	2000	0
05 Mar 05	05 Mar 05	Discovery Science Center—Santa Ana, CA	0	175	0
05 Mar 05	05 Mar 05	Fairmont State College—Fairmont, WV	0	6500	0
05 Mar 05	05 Mar 05	Market Mall—Calgary, Canada	0	200	0
05 Mar 05	05 Mar 05	South Bay Astronomy Club—Torrance, CA	0	55	0
05 Mar 05	05 Mar 05	Sue Kellogg Public Library—Stone Mountain, GA	0	25	0
05 Mar 05	05 Mar 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1000
05 Mar 05	26 Mar 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	45	0
06 Mar 05	06 Mar 05	Cuyahoga Public Library—Bera, OH	0	13	0
07 Mar 05	07 Mar 05	Eisenhower Observatory—Hopkins, MN	0	25	0
07 Mar 05	07 Mar 05	Helen May Sauter School—Gardner, MA	0	22	0
07 Mar 05	07 Mar 05	Shrewsbury Public Library—Shrewsbury, MA	0	25	0
07 Mar 05	07 Mar 05	Tupper Planetarium—Centereach, NY	0	88	0
07 Mar 05	07 Mar 05	University of Michigan—Ann Arbor, MI	0	200	0
07 Mar 05	07 Mar 05	University of North Texas—Denton, TX	0	150	0
07 Mar 05	07 Mar 05	Waterford School District—Waterford, MI	0	105	0
08 Mar 05	08 Mar 05	Atholton Elementary School—Crofton, MD	0	25	0
08 Mar 05	08 Mar 05	Central Wyoming Astronomical Society— Casper, WY	0	46	0
08 Mar 05	08 Mar 05	Hermosa Elementary School—Artesia, NM	0	87	0
08 Mar 05	08 Mar 05	Konawaena Middle School—Kealahou, HI	0	150	0
08 Mar 05	08 Mar 05	Lucio Middle School—Brownsville, TX	0	15	0
08 Mar 05	08 Mar 05	Stansbury Park Elementary School—Tooele, UT	0	2	0
08 Mar 05	08 Mar 05	The Palms Retirement Community— Fort Myers, FL	0	15	0
08 Mar 05	08 Mar 05	Tupper Planetarium—Centereach, NY	0	50	0
08 Mar 05	08 Mar 05	Tupper Planetarium—Centereach, NY	0	80	0
08 Mar 05	08 Mar 05	University of North Texas—Denton, TX	0	150	0
09 Mar 05	09 Mar 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
09 Mar 05	09 Mar 05	Grossmont High School—La Mesa, CA	0	150	0
09 Mar 05	09 Mar 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
09 Mar 05	09 Mar 05	Marquette-Alger School District—Marquette, MI	0	32	0
09 Mar 05	09 Mar 05	Tupper Planetarium—Centereach, NY	0	160	0
09 Mar 05	09 Mar 05	University of North Texas—Denton, TX	0	150	0
10 Mar 05	10 Mar 05	Bath Elementary School—Bath, NC	0	68	0
10 Mar 05	10 Mar 05	Brownsville Public Library—Brownsville, TX	0	11	0
10 Mar 05	10 Mar 05	Maine Maritime Academy—Castine, ME	0	20	0
10 Mar 05	10 Mar 05	Ohlone College, Newark Campus—Newark, CA	0	20	0

10 Mar 05	10 Mar 05	Society of Women Engineers—Los Alamitos, CA	0	15	0
10 Mar 05	10 Mar 05	Tupper Planetarium—Centereach, NY	0	50	0
10 Mar 05	11 Mar 05	Brookhaven National Laboratory—Upton, NY	0	60	0
11 Mar 05	11 Mar 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
11 Mar 05	11 Mar 05	Buffalo Astronomy Association (BAA)—Buffalo, NY	0	76	0
11 Mar 05	11 Mar 05	Hamburg High School—Hamburg, IA	0	165	0
11 Mar 05	11 Mar 05	Jay Starkey Park—New Port Richey, FL	0	30	0
11 Mar 05	11 Mar 05	Pizitz Middle School—Vestavia Hills, AL	0	150	0
11 Mar 05	11 Mar 05	Ryerson Nature Center—Deerfield, IL	0	18	0
11 Mar 05	11 Mar 05	Science Museum of Minnesota—St. Paul, MN	0	30	0
11 Mar 05	11 Mar 05	Sioux Trail Elementary School—Burnsville, MN	0	60	0
11 Mar 05	11 Mar 05	St. Augustine High School—St. Augustine, FL	0	17	0
11 Mar 05	11 Mar 05	Star Light-Star Bright Observatory— Colorado Springs, CO	0	20	0
11 Mar 05	11 Mar 05	Tupper Planetarium—Centereach, NY	0	50	0
11 Mar 05	11 Mar 05	Tupper Planetarium—Centereach, NY	0	165	0
11 Mar 05	11 Mar 05	University of Hawaii at Hilo—Hilo, HI	0	70	0
11 Mar 05	12 Mar 05	Fall Creek Falls State Park—Fall Creek Falls, TN	0	35	0
11 Mar 05	13 Mar 05	The International Club—Milledgeville, GA	0	17	0
11 Mar 05	23 Apr 05	Bruneau Dunes Observatory—Mountain Home, ID	0	343	0
12 Mar 05	12 Mar 05	Buffalo Museum of Science—Buffalo, NY	0	15	0
12 Mar 05	12 Mar 05	East Carolina University—Greenville, NC	0	68	0
12 Mar 05	12 Mar 05	Elm Fork Education Center—Denton, TX	0	1600	0
12 Mar 05	12 Mar 05	Explorit Science Center—Davis, CA	0	25	0
12 Mar 05	12 Mar 05	Girl Scouts of America—Akron, OH	0	150	0
12 Mar 05	12 Mar 05	Jay Starkey Park—New Port Richey, FL	0	55	0
12 Mar 05	12 Mar 05	Jay Starkey Park—New Port Richey, FL	0	200	0
12 Mar 05	12 Mar 05	KSER Radio, 90.7 FM—Everett—Everett, WA	0	14000	0
12 Mar 05	12 Mar 05	Mensa Monthly Dinner—Euclid, OH	0	12	0
12 Mar 05	12 Mar 05	Museum of Flight—Seattle, WA	0	11	0
12 Mar 05	12 Mar 05	Pacifica High School—Oxnard, CA	0	50	0
12 Mar 05	12 Mar 05	Pearl Harbor Survivors of Jacksonville— Jacksonville, FL	0	37	0
12 Mar 05	12 Mar 05	University of Hawaii at Hilo—Hilo, HI	0	1200	0
12 Mar 05	12 Mar 05	University of Puerto Rico at Mayagüez— Mayagüez, Puerto Rico	0	80	0
12 Mar 05	12 Mar 05	Youngstown State University—Youngstown, OH	0	60	0
13 Mar 05	13 Mar 05	Ann Arbor Hands-On Museum—Ann Arbor, MI	0	1100	0
14 Mar 05	14 Mar 05	Eisenhower Observatory—Hopkins, MN	0	25	0
14 Mar 05	14 Mar 05	Jefferson Elementary School—Faribault, MN	0	35	0
15 Mar 05	14 Mar 05	Blakemore Planetarium—Midland, TX	0	72	0
15 Mar 05	15 Mar 05	Barnes & Noble Bookstore—Winston-Salem, NC	0	35	0
15 Mar 05	15 Mar 05	Bell Memorial Hospital—Ishpeming, MI	0	20	0
15 Mar 05	15 Mar 05	La Vida Real—Fort Worth, TX	0	4	0
15 Mar 05	15 Mar 05	Montessori School—Santa Barbara, CA	0	30	0
15 Mar 05	15 Mar 05	Space Foundation—Colorado Springs, CO	0	1495	0
15 Mar 05	15 Mar 05	The Palms Retirement Community— Fort Myers, FL	0	20	0
15 Mar 05	15 Mar 05	Toastmasters—Haddonfield, NJ	0	30	0
15 Mar 05	15 Mar 05	Tupper Planetarium—Centereach, NY	0	160	0
15 Mar 05	15 Mar 05	WEAO-TV, Channel 49/Akron—Kent, OH	0	28	0
15 Mar 05	15 Mar 05	Wiley Elementary Magnet School—Raleigh, NC	0	800	0
15 Mar 05	17 Mar 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	13000	0
15 Mar 05	18 Mar 05	Austin High School—El Paso, TX	0	130	0
15 Mar 05	19 Mar 05	Montana State University—Billings, MT	0	6000	0
15 Mar 05	15 Apr 05	Alpencrest Observatory—Fairbanks, AK	0	100	0
16 Mar 05	16 Mar 05	Chief Dull Knife College—Lame Deer, MT	0	50	0
16 Mar 05	16 Mar 05	Discovery Center of Idaho—Boise, ID	0	2	0
16 Mar 05	16 Mar 05	El Sol Group—Fort Worth, TX	0	17	0
16 Mar 05	16 Mar 05	Laredo Community College—Laredo, TX	0	120	0
16 Mar 05	16 Mar 05	Motorola Headquarters—Schaumburg, IL	0	30	0
16 Mar 05	16 Mar 05	Sebastian Exchange Club—Sebastian, FL	0	35	0
16 Mar 05	16 Mar 05	Tristate Astronomers—Hagerstown, MD	0	25	0
16 Mar 05	16 Mar 05	Tupper Planetarium—Centereach, NY	0	150	0
16 Mar 05	16 Mar 05	Washington Elementary School—El Dorado, KS	0	270	0
16 Mar 05	16 Mar 05	WNEO-TV, Channel 45/Alliance—Kent, OH	0	24	0
16 Mar 05	18 Mar 05	Mesa Union Elementary School—Somis, CA	0	333	0

17 Mar 05	17 Mar 05	"Bowie Blade-News"—Bowie, MD	0	50000	0
17 Mar 05	17 Mar 05	4-H Arkansas—Little Rock, AR	0	100	0
17 Mar 05	17 Mar 05	Antioch Unified School District—Antioch, CA	0	125	0
17 Mar 05	17 Mar 05	Carson Nature Center—Littleton, CO	0	5	0
17 Mar 05	17 Mar 05	Davis County Library—Bountiful, UT	0	50	0
17 Mar 05	17 Mar 05	Fleming Middle School—Grants Pass, OR	0	94	0
17 Mar 05	17 Mar 05	Harlan Community Middle School—Harlan, IA	0	42	0
17 Mar 05	17 Mar 05	Lunar and Planetary Science Conference— League City, TX	0	3012	0
17 Mar 05	17 Mar 05	Morton College—Cicero, IL	0	12	0
17 Mar 05	17 Mar 05	Tupper Planetarium—Centereach, NY	0	150	0
18 Mar 05	18 Mar 05	Bush Elementary School—Jamestown, NY	0	49	0
18 Mar 05	18 Mar 05	Davis Hill Elementary School—Holden, MA	0	650	0
18 Mar 05	18 Mar 05	Demolay Legion of Honor—Strongsville, OH	0	75	0
18 Mar 05	18 Mar 05	Glenn Park Christian Church—Wichita, KS	0	100	0
18 Mar 05	18 Mar 05	KAFT-TV, Channel 13/Fayetteville—Conway, AR	0	23	0
18 Mar 05	18 Mar 05	Michigan Avenue Elementary School— Cleveland, TN	0	300	0
18 Mar 05	18 Mar 05	Orange Coast Community College— Costa Mesa, CA	0	140	0
18 Mar 05	18 Mar 05	Orange Coast Community College— Costa Mesa, CA	0	3500	0
18 Mar 05	18 Mar 05	Tupper Planetarium—Centereach, NY	0	150	0
18 Mar 05	19 Mar 05	Ward Beecher Planetarium—Youngstown, OH	0	90	0
18 Mar 05	21 Mar 05	Babb Middle School—Forest Park, GA	0	185	0
19 Mar 05	19 Mar 05	Allison Parkette—Houston, PA	0	25	0
19 Mar 05	19 Mar 05	Discovery Museum—Bridgeport, CT	0	200	0
19 Mar 05	19 Mar 05	Florida State Fairgrounds—Tampa, FL	0	16	0
19 Mar 05	19 Mar 05	Heyworth High School—Heyworth, IL	0	64	0
19 Mar 05	19 Mar 05	Johnsburg Public Library—McHenry, IL	0	25	0
19 Mar 05	19 Mar 05	Museum of Flight—Seattle, WA	0	23	0
19 Mar 05	19 Mar 05	Noble Planetarium—Fort Worth, TX	0	273	0
19 Mar 05	19 Mar 05	Oxford Elementary School—Berkeley, CA	0	174	0
19 Mar 05	19 Mar 05	Skyline Wilderness Park—Napa, CA	0	18	0
19 Mar 05	19 Mar 05	St. Mark's School of Texas—Dallas, TX	0	120	0
19 Mar 05	19 Mar 05	Tamke-Allan Observatory—Oak Ridge, TN	0	40	1000
20 Mar 05	20 Mar 05	Buffalo Museum of Science—Buffalo, NY	0	40	0
20 Mar 05	20 Mar 05	Evansville Astronomical Society—Evansville, IN	0	25	0
20 Mar 05	20 Mar 05	Lawrence Hall of Science—Berkeley, CA	0	60	0
20 Mar 05	20 Mar 05	Northwest Suburban Astronomers— Hoffman Estates, IL	0	75	0
21 Mar 05	21 Mar 05	Bush Elementary School—Jamestown, NY	0	34	0
21 Mar 05	21 Mar 05	Cabarrus County Schools—Concord, NC	0	150	0
21 Mar 05	21 Mar 05	Eisenhower Observatory—Hopkins, MN	0	25	0
21 Mar 05	21 Mar 05	Faribault Public Library—Faribault, MN	0	29	0
21 Mar 05	21 Mar 05	Fremont Elementary School—Long Beach, CA	0	40	0
21 Mar 05	21 Mar 05	Levy-Lakeside Elementary School—Merrick, NY	0	25	0
21 Mar 05	21 Mar 05	Morrow Observatory—Bedford, IN	0	15	0
21 Mar 05	21 Mar 05	Oak Point Intermediate School—Eden Prairie, MN	0	190	0
21 Mar 05	21 Mar 05	South Orange Amateur Radio Club— Mission Viejo, CA	0	150	0
21 Mar 05	21 Mar 05	Tupper Planetarium—Centereach, NY	0	150	0
21 Mar 05	21 Mar 05	YMCA San Diego—San Diego, CA	0	210	20
22 Mar 05	22 Mar 05	Mount Diablo Astronomical Society— Walnut Creek, CA	0	50	0
22 Mar 05	22 Mar 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	400	0
22 Mar 05	22 Mar 05	Old Donation Center for the Gifted and Talented— Virginia Beach, VA	0	200	0
22 Mar 05	22 Mar 05	Rochester Public Library—Rochester, IL	0	25	0
22 Mar 05	22 Mar 05	Tobin Elementary School—Cambridge, MA	0	50	0
22 Mar 05	22 Mar 05	University of North Texas—Denton, TX	0	50	0
22 Mar 05	22 Mar 05	Wissahickon Public Library—Ambler, PA	0	35	0
22 Mar 05	20 Jun 05	Museum of Science and History—Jacksonville, FL	0	1800	0
22 Mar 05	30 Sep 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	0	500000
23 Mar 05	23 Mar 05	Clark Memorial Community Center— Winchendon, MA	0	75	0

23 Mar 05	23 Mar 05	Park District Pre-School—Schaumburg, IL	0	57	0
23 Mar 05	23 Mar 05	Tupper Planetarium—Centereach, NY	0	150	0
24 Mar 05	24 Mar 05	Florida Gulf Coast University—Fort Myers, FL	0	400	0
24 Mar 05	24 Mar 05	New Hampton Community School—Franklin, NH	0	200	0
24 Mar 05	24 Mar 05	Norwescon—Seattle, WA	0	15	0
25 Mar 05	25 Mar 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
25 Mar 05	25 Mar 05	Airfield 4-H Center—Wakefield, VA	0	46	0
25 Mar 05	25 Mar 05	Palmcroft Elementary School—Yuma, AZ	0	52	0
25 Mar 05	25 Mar 05	University of Puerto Rico at Mayagüez— Mayagüez, Puerto Rico	0	300	0
26 Mar 05	26 Mar 05	Carolyn Parr Nature Museum—Napa, CA	0	20	0
26 Mar 05	26 Mar 05	Minicon 40—Bloomington, MN	0	40	0
27 Mar 05	27 Mar 05	Edwin Warner Park Nature Center—Nashville, TN	0	80	0
27 Mar 05	27 Mar 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	75	0
28 Mar 05	28 Mar 05	Las Positas College—Livermore, CA	0	35	0
28 Mar 05	28 Mar 05	North Carolina Museum of Natural Sciences— Raleigh, NC	0	300	0
28 Mar 05	29 Mar 05	Gregory's Grille Yard—Decatur, IL	0	14	0
29 Mar 05	29 Mar 05	Baton Rouge Amateur Radio Club— Baton Rouge, LA	0	47	0
29 Mar 05	29 Mar 05	Fairlawn Elementary School—Fort Pierce, FL	0	26	0
29 Mar 05	29 Mar 05	Society of Amateur Radio Astronomers— Sunrise, FL	0	26	0
29 Mar 05	30 Mar 05	Hofstra University—Hempstead, NY	0	105	0
30 Mar 05	30 Mar 05	Canton Public Library—Canton, MA	0	43	0
30 Mar 05	30 Mar 05	Clairmont High School—San Diego, CA	0	10	0
30 Mar 05	30 Mar 05	Hidden Valley Elementary School—Savage, MN	0	120	0
30 Mar 05	30 Mar 05	Kansas State University—Salina, KS	0	55	0
30 Mar 05	30 Mar 05	Roosevelt Elementary School—Faribault, MN	0	95	0
30 Mar 05	30 Mar 05	Texas A&M University—College Station, TX	0	29	0
30 Mar 05	30 Mar 05	Tupper Planetarium—Centereach, NY	0	88	0
30 Mar 05	30 Mar 05	WKYC-TV, Channel 3/Cleveland—Cleveland, OH	0	123000	0
31 Mar 05	31 Mar 05	"Vero Beach Press Journal"—Vero Beach, FL	0	40000	0
31 Mar 05	31 Mar 05	Black Hills State University—Spearfish, SD	0	40	0
31 Mar 05	31 Mar 05	Chief Dull Knife College—Lame Deer, MT	0	10	0
31 Mar 05	31 Mar 05	Dallas Convention center—Dallas, TX	0	3000	0
31 Mar 05	31 Mar 05	Fairlawn Elementary School—Fort Pierce, FL	0	18	0
31 Mar 05	31 Mar 05	Tracyton Elementary School—Silverdale, WA	0	46	0
31 Mar 05	01 Apr 05	St. Mary's College of Maryland— St. Mary's City, MD	0	50	0
01 Apr 05	01 Apr 05	"Mahoning Valley Parent Magazine"— Youngstown, OH	0	55000	0
01 Apr 05	01 Apr 05	Cub Scouts—Chicago, IL	0	100	0
01 Apr 05	01 Apr 05	Dallas Convention center—Dallas, TX	0	50	0
01 Apr 05	01 Apr 05	Interamerican University— San German, Puerto Rico	0	200	0
01 Apr 05	01 Apr 05	John Milledge Academy—Milledgeville, GA	0	61	0
01 Apr 05	01 Apr 05	Kopernik Space Education Center—Vestal, NY	0	30	0
01 Apr 05	01 Apr 05	Oxnard Community College—Oxnard, CA	0	24	0
01 Apr 05	01 Apr 05	St. Mary's College of Maryland— St. Mary's City, MD	0	70	0
01 Apr 05	01 Apr 05	St. Mary's College of Maryland— St. Mary's City, MD	0	5045	0
01 Apr 05	01 Apr 05	University of Michigan—Ann Arbor, MI	0	100	0
01 Apr 05	01 Apr 05	Yukon-Koyukuk School District—Fairbanks, AK	0	125	0
01 Apr 05	15 Apr 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	251	0
01 Apr 05	30 Apr 05	Hyatt Regency Maui—Lahaina, HI	0	521	0
02 Apr 05	02 Apr 05	"The Plain Dealer"—Cleveland, OH	0	223000	0
02 Apr 05	02 Apr 05	Community Center—Rough Rock, AZ	0	20	0
02 Apr 05	02 Apr 05	Pennsylvania State University— University Park, PA	0	95	0
02 Apr 05	02 Apr 05	Salt Lake County Library, West Valley City, UT	0	20	0
02 Apr 05	02 Apr 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1000
02 Apr 05	03 Apr 05	Central New York Maple Festival—Marathon, NY	0	400	0
02 Apr 05	29 Apr 05	Sandy Miller Elementary School—Las Vegas, NV	0	130	0
04 Apr 05	04 Apr 05	Castaic Elementary School—Castaic, CA	0	48	0

04 Apr 05	04 Apr 05	Clay County Central School—Rector, AR	0	1017	0
04 Apr 05	04 Apr 05	Fort Worth Academy—Fort Worth, TX	0	35	0
04 Apr 05	04 Apr 05	Manual High School—Denver, CO	0	18	0
04 Apr 05	04 Apr 05	Plymouth State University—Plymouth, NH	0	26	0
04 Apr 05	05 Apr 05	Boardman Glenwood Middle School— Boardman, OH	0	200	0
04 Apr 05	29 Apr 05	Georgia Southern University—Statesboro, GA	0	723	0
05 Apr 05	05 Apr 05	Cape Fear Academy—Wilmington, NC	0	125	0
05 Apr 05	05 Apr 05	International Storytelling Center— Jonesborough, TN	0	30	0
05 Apr 05	05 Apr 05	Lincoln Elementary School—Faribault, MN	0	100	0
05 Apr 05	05 Apr 05	Plaza Middle School—Virginia Beach, VA	0	200	0
05 Apr 05	05 Apr 05	San Angelo Amateur Astronomy Association— San Angelo, TX	0	180	0
05 Apr 05	05 Apr 05	Southern Elementary School—Glen Rock, PA	0	100	0
06 Apr 05	06 Apr 05	Fremont Elementary School—Long Beach, CA	0	95	0
06 Apr 05	06 Apr 05	Friendship Elementary School—Glen Rock, PA	0	50	0
06 Apr 05	06 Apr 05	Georgia Southern University—Statesboro, GA	0	6	0
06 Apr 05	06 Apr 05	Redwood Middle School—Napa, CA	0	24	0
06 Apr 05	06 Apr 05	Redwood Middle School—Napa, CA	0	25	0
06 Apr 05	06 Apr 05	Redwood Middle School—Napa, CA	0	32	0
06 Apr 05	06 Apr 05	Redwood Middle School—Napa, CA	0	33	0
06 Apr 05	06 Apr 05	St. Simon's Episcopal Church—Staten Island, NY	0	23	0
06 Apr 05	06 Apr 05	Sycamore Canyon Elementary School— Newbury Park, CA	0	22	0
06 Apr 05	06 Apr 05	Westminster Christian Homeschool Academy— Westminster, MD	0	120	0
07 Apr 05	07 Apr 05	Computerfest—Dayton, OH	0	160	0
07 Apr 05	07 Apr 05	Greene County Tech Elementary School— Paragould, AR	0	20	0
07 Apr 05	07 Apr 05	Owatonna Public Library—Owatonna, MN	0	25	0
07 Apr 05	07 Apr 05	Park Library—Taylorsville, UT	0	20	0
07 Apr 05	07 Apr 05	Rich Middle School—Laketown, UT	0	31	0
07 Apr 05	07 Apr 05	Vanceboro Elementary School—Vanceboro, NC	0	112	0
07 Apr 05	10 Apr 05	Connecticut Expo Center—Hartford, CT	0	15000	0
08 Apr 05	08 Apr 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
08 Apr 05	08 Apr 05	August Knodt Elementary School—Stockton, CA	0	35	0
08 Apr 05	08 Apr 05	Chouteau High School—Chouteau, OK	0	35	0
08 Apr 05	08 Apr 05	Hazleton Elementary School—Stockton, CA	0	30	0
08 Apr 05	08 Apr 05	Santa Maria High School—Santa Maria, CA	0	150	0
08 Apr 05	08 Apr 05	St. Mark's School of Texas—Dallas, TX	0	300	0
08 Apr 05	08 Apr 05	Tecumseh North Elementary School— Tecumseh, KS	0	55	0
08 Apr 05	08 Apr 05	Texas Tech University—Lubbock, TX	0	107	0
08 Apr 05	08 Apr 05	Tobin Elementary School—Cambridge, MA	0	100	0
08 Apr 05	09 Apr 05	American Museum of Science and Energy— Oak Ridge, TN	0	300	0
09 Apr 05	09 Apr 05	Anne Beers Middle School—Washington, DC	0	50	800
09 Apr 05	09 Apr 05	Boyce Thompson Arboretum State Park— Superior, AZ	0	250	0
09 Apr 05	09 Apr 05	Connecticut College—New London, CT	0	100	0
09 Apr 05	09 Apr 05	Johns Hopkins University—Baltimore, MD	0	150	0
09 Apr 05	09 Apr 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	6	0
09 Apr 05	09 Apr 05	Nipomo Public Library—Nipomo, CA	0	30	0
09 Apr 05	09 Apr 05	Salt Lake County Library—West Valley City, UT	0	15	0
09 Apr 05	09 Apr 05	Salt Springs State Park—Franklin Forks, PA	0	15	0
09 Apr 05	09 Apr 05	Seagrave Memorial Observatory— North Scituate, RI	0	20	0
09 Apr 05	09 Apr 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	5	0
09 Apr 05	30 Apr 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	120	0
10 Apr 05	10 Apr 05	Assumption College—Worcester, MA	0	30	0
10 Apr 05	10 Apr 05	Challenger Learning Center of San Antonio— San Antonio, TX	0	700	0
10 Apr 05	10 Apr 05	Pouch Camp, Manor Road—Staten Island, NY	0	43	0
10 Apr 05	10 Apr 05	Sky Meadows State Park—Delaplane/Paris, VA	0	83	0

11 Apr 05	11 Apr 05	Challenger Learning Center of San Antonio— San Antonio, TX	0	750	0
11 Apr 05	11 Apr 05	Civil Air Patrol TX 215—El Paso, TX	0	22	0
11 Apr 05	11 Apr 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
11 Apr 05	11 Apr 05	Midwestern State University—Wichita Falls, TX	0	100	0
11 Apr 05	11 Apr 05	Tupper Planetarium—Centereach, NY	0	50	0
11 Apr 05	12 Apr 05	Coyote Valley Elementary School—Middletown, CA	0	20	0
11 Apr 05	15 Apr 05	Rio Vista Elementary School—San Bernardino, CA	0	350	0
12 Apr 05	12 Apr 05	Brownsville Public Library—Brownsville, TX	0	35	0
12 Apr 05	12 Apr 05	City of Boston After School Initiative—Boston, MA	0	25	0
12 Apr 05	12 Apr 05	Comcast/Cable News Network (CNN)—Atlanta, GA	0	10000	0
12 Apr 05	12 Apr 05	Enloe High School—Raleigh, NC	0	200	0
12 Apr 05	12 Apr 05	Museum of Science—Boston, MA	0	95	0
12 Apr 05	12 Apr 05	National Radio Astronomy Observatory— Socorro, NM	0	25	0
12 Apr 05	12 Apr 05	Tobin Elementary School—Cambridge, MA	0	60	0
12 Apr 05	12 Apr 05	Tupper Planetarium—Centereach, NY	0	50	0
12 Apr 05	12 Apr 05	Tupper Planetarium—Centereach, NY	0	80	0
12 Apr 05	12 Apr 05	Vista Fundamental School—Simi Valley, CA	0	90	0
12 Apr 05	15 Apr 05	Wonderlab Museum of Science, Health, and Technology—Bloomington, IN	0	5151	0
13 Apr 05	13 Apr 05	Clairmont High School—San Diego, CA	0	13	0
13 Apr 05	13 Apr 05	Eisenhower Observatory—Hopkins, MN	0	15	0
13 Apr 05	13 Apr 05	Klein Independent School District—Klein, TX	0	3800	0
13 Apr 05	13 Apr 05	North Carolina State Legislative Building— Raleigh, NC	0	4000	0
13 Apr 05	13 Apr 05	University of Hawaii at Hilo—Hilo, HI	0	500	200
14 Apr 05	14 Apr 05	Chester County Intermediate Unit— Downingtown, PA	0	18	0
14 Apr 05	14 Apr 05	Clare Primary School—Clare, MI	0	100	0
14 Apr 05	14 Apr 05	Jordan School District—West Jordan, UT	0	25	0
14 Apr 05	14 Apr 05	Lakeland Community College—Kurtland, OH	0	150	0
14 Apr 05	14 Apr 05	Triadelphia Middle School—Wheeling, WV	0	75	0
14 Apr 05	14 Apr 05	Upper Dublin Planetarium—Dresher, PA	0	50	0
15 Apr 05	15 Apr 05	Antioch Unified School District—Antioch, CA	0	36	0
15 Apr 05	15 Apr 05	Chouteau High School—Chouteau, OK	0	75	0
15 Apr 05	15 Apr 05	Eagle River Nature Center—Eagle River, AK	0	50	0
15 Apr 05	15 Apr 05	Ludlowe High School—Fairfield, CT	0	218	0
15 Apr 05	15 Apr 05	NASA Glenn Research Center—Cleveland, OH	0	450000	0
15 Apr 05	15 Apr 05	Parkmead Elementary School—Walnut Creek, CA	0	70	0
15 Apr 05	15 Apr 05	Sunnydale Elementary School—Streamwood, IL	0	22	0
15 Apr 05	15 Apr 05	Ventura County Astronomical Society—Ojai, CA	0	60	0
15 Apr 05	15 Apr 05	Yates Primary School—Cleveland, TN	0	200	0
15 Apr 05	16 Apr 05	“Boston Herald”—Boston, MA	0	6600	0
15 Apr 05	16 Apr 05	Cincinnati Observatory Center—Cincinnati, OH	0	550	0
15 Apr 05	16 Apr 05	Texas Tech University—Lubbock, TX	0	100	0
15 Apr 05	25 Apr 05	Greene County Tech Elementary School— Paragould, AR	0	240	0
16 Apr 05	16 Apr 05	Adventure Science Center—Nashville, TN	0	207	0
16 Apr 05	16 Apr 05	Blakemore Planetarium—Midland, TX	0	278	0
16 Apr 05	16 Apr 05	Brooke Hills Park—Wellsburg—WV	0	75	0
16 Apr 05	16 Apr 05	Clay Center for Science and Technology, Brookline, MA	0	125	0
16 Apr 05	16 Apr 05	Condit Exhibits—Denver, CO	0	18	0
16 Apr 05	16 Apr 05	Discovery Center of Idaho—Boise, ID	0	20	0
16 Apr 05	16 Apr 05	Discovery Park—Safford, AZ	0	100	0
16 Apr 05	16 Apr 05	East Kentucky Science Center—Prestonsburg, KY	0	20	0
16 Apr 05	16 Apr 05	Evansville Museum of Arts, History and Science— Evansville, IN	0	749	0
16 Apr 05	16 Apr 05	Exploration Science Center and Children’s Museum of Albuquerque—Albuquerque, NM	0	100	0
16 Apr 05	16 Apr 05	Garfield Elementary School—Livonia, MI	0	14	0
16 Apr 05	16 Apr 05	Hamburg Natural Historical Society— Hamburg, NY	0	18	0
16 Apr 05	16 Apr 05	Harper College—Palatine, IL	0	25	0
16 Apr 05	16 Apr 05	Harper College—Palatine, IL	0	34	0
16 Apr 05	16 Apr 05	Henry Hudson Planetarium—Albany, NY	0	15100	500
16 Apr 05	16 Apr 05	Jay Starkey Park—New Port Richey, FL	0	85	0

16 Apr 05	16 Apr 05	Museum of Science and Industry—Tampa, FL	0	61	0
16 Apr 05	16 Apr 05	Museum of Science and Industry—Chicago, IL	0	150	0
16 Apr 05	16 Apr 05	NASA Glenn Research Center—Cleveland, OH	0	4500	0
16 Apr 05	16 Apr 05	NASA Glenn Research Center—Cleveland, OH	0	123000	0
16 Apr 05	16 Apr 05	Natural Science Center—Greensboro, NC	0	10	0
16 Apr 05	16 Apr 05	Niles Public Library—Niles, MI	0	6	0
16 Apr 05	16 Apr 05	Novins Planetarium—Toms River, NJ	0	12030	0
16 Apr 05	16 Apr 05	Orlando Science Center—Orlando, FL	0	25	0
16 Apr 05	16 Apr 05	Prince Kuhio Mall—Hilo, HI	0	15000	0
16 Apr 05	16 Apr 05	Purdue University—West Lafayette, IN	0	6000	0
16 Apr 05	16 Apr 05	Skyline Wilderness Park—Napa, CA	0	61	0
16 Apr 05	16 Apr 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	550	0
16 Apr 05	16 Apr 05	St. Mark's School of Texas—Dallas, TX	0	120	0
16 Apr 05	16 Apr 05	Sun 'n' Fun Fly-In—Lakeland, FL	0	15	0
16 Apr 05	16 Apr 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1000
16 Apr 05	16 Apr 05	Tamke-Allan Observatory—Oak Ridge, TN	0	300	2000
16 Apr 05	16 Apr 05	Twin Peaks Mall—Longmont, CO	0	300	0
16 Apr 05	16 Apr 05	University of Arizona—Tucson, AZ	0	30	0
16 Apr 05	16 Apr 05	Virginia Beach Public Libraries—Virginia Beach, VA	0	600	0
16 Apr 05	16 Apr 05	Ward Beecher Planetarium—Youngstown, OH	0	250	0
16 Apr 05	16 Apr 05	Washington Pavilion of Arts and Science, Kirby Science Discovery Center—Sioux Falls, SD	0	100	0
16 Apr 05	16 Apr 05	Winton Woods—Cincinnati, OH	0	70	0
16 Apr 05	17 Apr 05	WARD'S Natural Science—Rochester, NY	0	60	0
17 Apr 05	17 Apr 05	Madison Metropolitan School District—Madison, WI	0	350	0
18 Apr 05	18 Apr 05	Buffalo Museum of Science—Buffalo, NY	0	25	0
18 Apr 05	18 Apr 05	Fremont Elementary School—Long Beach, CA	0	35	0
18 Apr 05	18 Apr 05	Keewaydin Elementary School—Minneapolis, MN	0	30	0
18 Apr 05	18 Apr 05	Millburn Community Consolidated School—Wadsworth, IL	0	127	0
18 Apr 05	18 Apr 05	Morrow Observatory—Bedford, IN	0	13	0
18 Apr 05	18 Apr 05	Tupper Planetarium—Centereach, NY	0	150	0
18 Apr 05	18 Apr 05	Waterford School District—Waterford, MI	0	100	0
18 Apr 05	18 Apr 05	WBRA-TV, Channel 15/Roanoke—Roanoke, VA	0	26	0
18 Apr 05	18 Apr 05	WFAD Radio, 1490 AM/Middlebury—Middlebury, VT	0	13000	0
18 Apr 05	22 Apr 05	Iola High School—Iola, KS	0	1200	0
19 Apr 05	19 Apr 05	Barnes & Noble Bookstore—Winston-Salem, NC	0	40	0
19 Apr 05	19 Apr 05	Black Hills Astronomical Society—Rapid City, SD	0	18	0
19 Apr 05	19 Apr 05	Fort Worth Museum of Science and History—Fort Worth, TX	0	125	0
19 Apr 05	19 Apr 05	Fremont Astronomical Society—Long Beach, CA	0	32	0
19 Apr 05	19 Apr 05	Mary Randall Preschool—Hillsdale, MI	0	60	0
19 Apr 05	19 Apr 05	St. Collette School—Rolling Meadows, IL	0	18	0
19 Apr 05	19 Apr 05	Tupper Planetarium—Centereach, NY	0	150	0
19 Apr 05	19 Apr 05	WUPN-TV, Channel 48/Winston-Salem—Winston-Salem, NC	0	1000	0
19 Apr 05	21 Apr 05	Wilson School—Owatonna, MN	0	150	0
20 Apr 05	20 Apr 05	Discovery Center of Idaho—Boise, ID	0	12	0
20 Apr 05	20 Apr 05	Mesa Union Elementary School—Somis, CA	0	700	0
20 Apr 05	20 Apr 05	Mission Trails Regional Park—San Diego, CA	0	60	0
20 Apr 05	20 Apr 05	North Medford High School—Medford, OR	0	60	0
20 Apr 05	20 Apr 05	Society for the Advancement of Material and Process Engineering (SAMPE)—Anaheim, CA	0	10	0
21 Apr 05	21 Apr 05	Ascension School—Cleveland, OH	0	50	0
21 Apr 05	21 Apr 05	Grand County Astronomical Society—Frasier, CO	0	25	0
21 Apr 05	21 Apr 05	Kiwanis of American Canyon—American Canyon, CA	0	36	0
21 Apr 05	21 Apr 05	Morton College—Cicero, IL	0	14	0
21 Apr 05	21 Apr 05	Smith Junior High School—Mesa, AZ	0	250	0
21 Apr 05	21 Apr 05	Tupper Planetarium—Centereach, NY	0	150	0
21 Apr 05	21 Apr 05	University of Chicago Laboratory Schools—Chicago, IL	0	22	0
21 Apr 05	21 Apr 05	University of Hawaii at Hilo—Hilo, HI	0	60	0
22 Apr 05	22 Apr 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0

22 Apr 05	22 Apr 05	Buehler Challenger and Science Center— Paramus, NJ	0	35	0
22 Apr 05	22 Apr 05	Des Moines Area Community College— Marshalltown, IA	0	64	0
22 Apr 05	22 Apr 05	Ford Elementary School—Richmond, CA	0	75	0
22 Apr 05	22 Apr 05	Jones Elementary School—Rockwall, TX	0	85	0
22 Apr 05	22 Apr 05	Lincoln Elementary School—Petaluma, CA	0	25	0
22 Apr 05	22 Apr 05	Los Angeles Convention Center—Los Angeles, CA	0	35	0
22 Apr 05	22 Apr 05	Palmcroft Elementary School—Yuma, AZ	0	31	0
22 Apr 05	22 Apr 05	Red Hills Middle School—Richfield, UT	0	72	0
22 Apr 05	22 Apr 05	Reinhardt Elementary School—Rockwall, TX	0	60	0
22 Apr 05	22 Apr 05	Southern Oregon Skywatchers—Medford, OR	0	48	0
22 Apr 05	22 Apr 05	St. Petersburg Astronomy Club— St. Petersburg, FL	0	70	0
22 Apr 05	22 Apr 05	Tupper Planetarium—Centereach, NY	0	150	0
22 Apr 05	22 Apr 05	University of Hawaii at Hilo—Hilo, HI	0	20	0
22 Apr 05	22 Apr 05	Vogelei Park Barn—Hoffman Estates, IL	0	50	0
23 Apr 05	23 Apr 05	Boulder Astronomy Club—Boulder, CO	0	37	0
23 Apr 05	23 Apr 05	Clinton Public Schools—Clinton, OK	0	40	0
23 Apr 05	23 Apr 05	Museum of Natural History and Planetarium— Providence, RI	0	70	0
23 Apr 05	23 Apr 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	7	0
23 Apr 05	23 Apr 05	Prescott Public Library—Prescott, AZ	0	250	0
23 Apr 05	23 Apr 05	Prescott Public Library—Prescott, AZ	0	300	0
23 Apr 05	23 Apr 05	Santa Barbara Museum of Natural History— Santa Barbara, CA	0	500	0
23 Apr 05	23 Apr 05	Staten Island Museum—Staten Island, NJ	0	20	0
23 Apr 05	23 Apr 05	University of Texas at Arlington—Arlington, TX	0	35	0
23 Apr 05	24 Apr 05	Adventure Science Center—Nashville, TN	0	300	0
25 Apr 05	25 Apr 05	AMVETS Post 22—Visalia, CA	0	43	0
25 Apr 05	25 Apr 05	Andrews Independent School District Planetarium—Andrews, TX	0	300	0
25 Apr 05	25 Apr 05	Arvin High School—Arvin, CA	0	150	0
25 Apr 05	25 Apr 05	Batesville High School—Batesville, AR	0	20	0
25 Apr 05	25 Apr 05	Christa McAuliffe Professional Development Center—Evansville, IN	0	17	0
25 Apr 05	25 Apr 05	Fremont Astronomical Society—Long Beach, CA	0	25	0
25 Apr 05	25 Apr 05	Hot Springs Public Library—Hot Springs, SD	0	28	0
25 Apr 05	25 Apr 05	Kalamazoo Valley Museum—Kalamazoo, MI	0	50	0
25 Apr 05	25 Apr 05	Keewaydin Elementary School—Minneapolis, MN	0	27	0
25 Apr 05	25 Apr 05	Pacific Science Center—Seattle, WA	0	150	0
25 Apr 05	25 Apr 05	St. Mark's School of Texas—Dallas, TX	0	2000	0
25 Apr 05	25 Apr 05	University of Hawaii at Hilo—Hilo, HI	0	30	0
25 Apr 05	25 Apr 05	University of North Carolina at Pembroke— Pembroke, NC	0	80100	0
25 Apr 05	28 Apr 05	Mesa Union Elementary School—Somis, CA	0	291	0
26 Apr 05	26 Apr 05	"Beacon Hill Times"—Boston, MA	0	21000	0
26 Apr 05	26 Apr 05	Austin High School—El Paso, TX	0	1503	0
26 Apr 05	26 Apr 05	City of Boston After School Initiative—Boston, MA	0	25	0
26 Apr 05	26 Apr 05	Community Education Program—Rapid City, SD	0	19	0
26 Apr 05	26 Apr 05	Damian Elementary School—Canutillo, TX	0	230	0
27 Apr 05	27 Apr 05	Florida Memorial College—Miami, FL	0	17	0
27 Apr 05	27 Apr 05	Hilton Head Middle School— Hilton Head Island, SC	0	325	0
27 Apr 05	27 Apr 05	KSER Radio, 90.7 FM—Everett—Everett, WA	0	14000	0
27 Apr 05	27 Apr 05	Long Island Museum of Science & Technology— Garden City, NY	0	254	0
28 Apr 05	28 Apr 05	Hargitt Middle School—Norwalk, CA	0	257	0
28 Apr 05	28 Apr 05	Lockheed Martin Space Systems Company— Denver, CO	0	70	0
28 Apr 05	28 Apr 05	National Geographic Society—Washington, DC	0	135	0
28 Apr 05	28 Apr 05	Ohlone College, Newark Campus—Newark, CA	0	25	0
28 Apr 05	28 Apr 05	Sycamore Canyon Elementary School— Newbury Park, CA	0	38	0
29 Apr 05	29 Apr 05	Campanelli School—Schaumburg, IL	0	95	0
29 Apr 05	29 Apr 05	Coal Creek Elementary School—Louisville, CO	0	20	0
29 Apr 05	29 Apr 05	Comanche Elementary School—Albuquerque, NM	0	75	0

29 Apr 05	29 Apr 05	Crowell Chamber of Commerce and Comanche Springs—Crowell, TX	0	22	0
29 Apr 05	29 Apr 05	Eastwood Mall—Niles, OH	0	500	0
29 Apr 05	29 Apr 05	Flory Science Academy—Moorpark, CA	0	331	0
29 Apr 05	29 Apr 05	Highland Road Park Observatory—Baton Rouge, LA	0	97	0
29 Apr 05	29 Apr 05	Interactive Science, Space and Aeronautics Center for Education—Cincinnati, OH	0	500	0
29 Apr 05	29 Apr 05	Kopernik Space Education Center—Vestal, NY	0	10	0
29 Apr 05	29 Apr 05	North Elementary School—Youngstown, OH	0	80	0
29 Apr 05	30 Apr 05	Blue Ridge Mall—Hendersonville, NC	0	120	0
29 Apr 05	26 Jun 05	Bruneau Dunes Observatory—Mountain Home, ID	0	1312	0
30 Apr 05	30 Apr 05	Bays Mountain Planetarium—Kingsport, TN	0	100	0
30 Apr 05	30 Apr 05	Feather River College—Quincy, CA	0	15	0
30 Apr 05	30 Apr 05	John Paul Regional School—Windsor Mill, MD	0	17	0
30 Apr 05	30 Apr 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
30 Apr 05	30 Apr 05	Palomar Mountain Observatory Campground—Palomar Mountain, CA	0	53	0
30 Apr 05	30 Apr 05	Performer's Showcase of Kansas City, KS—Merriam, KS	0	135	0
30 Apr 05	30 Apr 05	Wonderlab Museum of Science, Health, and Technology—Bloomington, IN	0	60	0
01 May 05	01 May 05	"Mahoning Valley Parent Magazine"—Youngstown, OH	0	55000	0
01 May 05	01 May 05	Brownie Girl Scouts—Chicago, IL	0	60	0
01 May 05	01 May 05	Rocky River Unitarian Church—Rocky River, OH	0	60	0
01 May 05	02 May 05	U.S. Space and Rocket Center—Huntsville, AL	0	14	0
01 May 05	29 May 05	Hyatt Regency Maui—Lahaina, HI	0	418	0
01 May 05	30 Jun 05	Seagrave Memorial Observatory—North Scituate, RI	0	100	0
01 May 05	01 Aug 05	Spectrum Astro, Inc.—Gilbert, AZ	0	0	1600
02 May 05	02 May 05	Ames Elementary School—St. Paul, MN	0	25	0
02 May 05	02 May 05	Beechwood Elementary School—Whitehall, OH	0	75	0
02 May 05	02 May 05	Chester County Intermediate Unit—Downingtown, PA	0	17	0
02 May 05	02 May 05	Cub Scout Pack 600—New Haven, VT	0	11	0
02 May 05	02 May 05	Fremont Astronomical Society—Long Beach, CA	0	25	0
02 May 05	02 May 05	Tennessee State Parks Naturalist Retreat—Fall Creek Falls, TN	0	60	0
02 May 05	02 May 05	Waterford School District—Waterford, MI	0	105	0
02 May 05	31 May 05	Calusa Nature Center and Planetarium—Fort Myers, FL	0	883	0
03 May 05	03 May 05	Brockett Elementary School—Tucker, GA	0	100	0
03 May 05	03 May 05	Kelly Elementary School—Wichita, KS	0	520	0
03 May 05	03 May 05	Poplar Creek Public Library—Streamwood, IL	0	22	0
03 May 05	31 May 05	YMCA of Jamestown—Jamestown, NY	0	18	0
04 May 05	04 May 05	Bennett College—Greensboro, NC	0	70	0
04 May 05	04 May 05	NASA Ames Research Center—Moffett Field, CA	0	60	1170
04 May 05	04 May 05	Reading Hilltop Elementary School—Reading, OH	0	500	0
04 May 05	04 May 05	San Diego State University—San Diego, CA	0	30	0
04 May 05	06 May 05	Pfizer Global Research & Development—Groton, CT	0	500	0
04 May 05	25 May 05	Rogers Elementary School—Jamestown, NY	0	32	0
05 May 05	05 May 05	College of Staten Island—Staten Island, NY	0	50100	0
05 May 05	05 May 05	Denver Museum of Nature and Science—Denver, CO	0	40	0
05 May 05	05 May 05	Greene County Tech Elementary School—Paragould, AR	0	25	0
05 May 05	05 May 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
05 May 05	05 May 05	Livingstone College—Salisbury, NC	0	200	0
05 May 05	05 May 05	Ludwig Elementary School—Lockport, IL	0	29	0
05 May 05	05 May 05	Museum of Science and Industry—Tampa, FL	0	15	0
05 May 05	05 May 05	National Air and Space Museum Steven F. Udvar-Hazy Center—Chantilly, VA	0	350	0
05 May 05	05 May 05	Ohlone College, Newark Campus—Newark, CA	0	25	0
05 May 05	05 May 05	Portage Rotary Senior Center—Portage, MI	0	53	0
05 May 05	05 May 05	Science Central—Fort Wayne, IN	0	700	0
05 May 05	05 May 05	Shrewsbury Elementary School—Shrewsbury, PA	0	100	0

05 May 05	05 May 05	South Hiram Elementary School—South Hiram, ME	0	120	0
05 May 05	05 May 05	Stephen's Elementary School—Burlington, KY	0	850	0
05 May 05	05 May 05	Valley Intermediate School—Pelham, AL	0	450	0
05 May 05	12 May 05	Randolph YMCA—Randolph, NY	0	10	0
06 May 05	06 May 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
06 May 05	06 May 05	"Vero Beach Press Journal"—Vero Beach, FL	0	40000	0
06 May 05	06 May 05	Blake Planetarium—Plymouth, MA	0	55	0
06 May 05	06 May 05	Brownie Troop 174—Pelham, AL	0	10	0
06 May 05	06 May 05	CUNY Hunter College—New York, NY	0	50	0
06 May 05	06 May 05	Denver Museum of Nature and Science— Denver, CO	0	200	0
06 May 05	06 May 05	Eagan Rotary Club—Eagan, MN	0	80	0
06 May 05	06 May 05	H.C. Mines Intermediate School—Howland, OH	0	30	0
06 May 05	06 May 05	Insights El Paso Science Museum—El Paso, TX	0	450	0
06 May 05	06 May 05	Lisbon Consolidated School—Lisbon, ME	0	200	0
06 May 05	06 May 05	Maurine Cain Middle School—Rockwall, TX	0	86	0
06 May 05	06 May 05	National Air and Space Museum Steven F. Udvar-Hazy Center—Chantilly, VA	0	600	0
06 May 05	06 May 05	Palmcroft Elementary School—Yuma, AZ	0	52	0
06 May 05	06 May 05	Science Museum of Minnesota—St. Paul, MN	0	500	0
06 May 05	06 May 05	Texas Christian University—Fort Worth, TX	0	350	0
06 May 05	06 May 05	Texas Christian University—Fort Worth, TX	0	800	0
06 May 05	06 May 05	ToBeContinued Convention—Schaumburg, IL	0	8	0
06 May 05	06 May 05	ToBeContinued Convention—Schaumburg, IL	0	25	0
06 May 05	06 May 05	University of Hawaii at Hilo—Hilo, HI	0	50	200
06 May 05	08 May 05	LepraCon 2005—Phoenix, AZ	0	2000	0
06 May 05	03 Jun 05	Ring Elementary School—Jamestown, NY	0	22	0
07 May 05	07 May 05	Bruton Memorial Library—Plant City, FL	0	225	0
07 May 05	07 May 05	Haaheo School—Hilo, HI	0	1200	0
07 May 05	07 May 05	Iowa Educator Resource Center—Sioux City, IA	0	35	0
07 May 05	07 May 05	Pungo-Blackwater Library—Virginia Beach, VA	0	70	0
07 May 05	07 May 05	Sky Meadows State Park—Delaplane/Paris, VA	0	20	0
07 May 05	07 May 05	Tamke-Allan Observatory—Oak Ridge, TN	0	50	1000
07 May 05	07 May 05	Willow Street Elementary School— Willow Street, PA	0	60	0
08 May 05	08 May 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
08 May 05	11 May 05	KDIN-TV, Channel 11/Des Moines—Johnston, IA	0	30	0
09 May 05	09 May 05	Ascension Lutheran Church—North Olmsted, OH	0	24	0
09 May 05	09 May 05	Baton Rouge Astronomical Society— Baton Rouge, LA	0	17	0
09 May 05	09 May 05	Clay County Central School—Rector, AR	0	60	0
09 May 05	09 May 05	Fremont Astronomical Society—Long Beach, CA	0	25	0
09 May 05	09 May 05	Palm Grove Elementary School—Brownsville, TX	0	12	0
09 May 05	09 May 05	University of Hawaii at Hilo—Hilo, HI	0	1000	200
09 May 05	11 May 05	Mildura West Primary School—Mildura, Australia	0	450	0
09 May 05	16 May 05	Lakewood YMCA—Lakewood, NY	0	36	0
09 May 05	18 May 05	West Knox Elementary School—Corbin, KY	0	600	0
10 May 05	10 May 05	Brownsville Public Library—Brownsville, TX	0	22	0
10 May 05	10 May 05	New Middletown Elementary School— New Middletown, IN	0	30	0
10 May 05	10 May 05	Sycamore Canyon Elementary School— Newbury Park, CA	0	38	0
11 May 05	11 May 05	Environmental Studies Center—Mobile, AL	0	300	0
11 May 05	11 May 05	Great Lakes Planetarium Association— Cleveland, OH	0	200	0
11 May 05	11 May 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
11 May 05	11 May 05	Lay Elementary School—Barbourville, KY	0	5250	0
11 May 05	11 May 05	Mission Trails Regional Park—San Diego, CA	0	60	0
11 May 05	11 May 05	North Plainfield Church—North Plainfield, NJ	0	25	0
12 May 05	12 May 05	Berryville Elementary School—Berryville, AR	0	114	0
12 May 05	12 May 05	Bryce Canyon National Park—Bryce Canyon, UT	0	65	0
12 May 05	12 May 05	Hametown Church—Shrewsbury, PA	0	20	0
12 May 05	12 May 05	Museum of Science and History—Jacksonville, FL	0	700	0
12 May 05	15 May 05	Robeson Planetarium and Science Center— Lumberton, NC	0	400	0
13 May 05	13 May 05	Community Observatory Program—Girard, KS	0	20	0
13 May 05	13 May 05	Elmwood Jail for Women—Milpitas, CA	0	32	0
13 May 05	13 May 05	Evansville Astronomical Society—Evansville, IN	0	40	0

13 May 05	13 May 05	Great Lakes Planetarium Association— Cleveland, OH	0	46	0
13 May 05	13 May 05	Harper Elementary School—Evansville, IN	0	80	0
13 May 05	13 May 05	Mars Astronomy Club—Tampa, FL	0	22	0
13 May 05	13 May 05	St. Augustine High School—St. Augustine, FL	0	18	0
13 May 05	13 May 05	St. Catherine of Sienna—Reseda, CA	0	300	0
13 May 05	13 May 05	Wichita River Festival Block Party—Wichita, KS	0	20000	0
13 May 05	13 May 05	Woodman Elementary School—Wichita, KS	0	600	0
13 May 05	14 May 05	Foothill Community College—Los Altos Hills, CA	0	800	0
13 May 05	16 May 05	KDIN-TV, Channel 11/Des Moines—Johnston, IA	0	24	0
14 May 05	14 May 05	American Association of University Women, Marin Branches—San Rafael, CA	0	75	0
14 May 05	14 May 05	Augusta Teddy Bear Picnic—Augusta, KS	0	200	0
14 May 05	14 May 05	Big South Fork National River and Recreation Area—Oneida, TN	0	35	0
14 May 05	14 May 05	Crowell Chamber of Commerce and Comanche Springs—Crowell, TX	0	19	0
14 May 05	14 May 05	Museum of Science and Industry—Chicago, IL	0	33	0
14 May 05	14 May 05	Rochester Public Library—Rochester, IL	0	50	0
14 May 05	14 May 05	Skyline Wilderness Park—Napa, CA	0	44	0
14 May 05	14 May 05	Wachusett Valley Christian Church—Holden, MA	0	225	0
15 May 05	15 May 05	Forsyth Area Astronomy Club— Winston-Salem, NC	0	75	0
15 May 05	15 May 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
16 May 05	16 May 05	Fremont Astronomical Society—Long Beach, CA	0	25	0
16 May 05	16 May 05	Kitt Peak National Observatory— Tohono O'odham Reservation, AZ	0	100	0
16 May 05	16 May 05	New Detroit Science Center—Detroit, MI	0	1200	0
16 May 05	16 May 05	University of Washington—Seattle, WA	0	250	0
16 May 05	16 May 05	WFAD Radio, 1490 AM/Middlebury— Middlebury, VT	0	13000	0
16 May 05	20 May 05	Rio Vista Elementary School—San Bernardino, CA	0	350	0
17 May 05	17 May 05	Boonshoft Museum of Discovery—Dayton, OH	0	55	0
17 May 05	17 May 05	Daniel Webster College—Nashua, NH	0	11	0
17 May 05	17 May 05	Fred J. Page High School—Franklin, TN	0	120	0
17 May 05	17 May 05	Georgia Southern University—Statesboro, GA	0	41	0
17 May 05	17 May 05	Hilton Head Preparatory School— Hilton Head Island, SC	0	35	0
17 May 05	17 May 05	Keavy Elementary School—Keavy, KY	0	70	0
17 May 05	17 May 05	New Hope Academy—Yardley, PA	0	42	0
17 May 05	17 May 05	Upper Moreland Public Library—Willow Grove, PA	0	52	0
18 May 05	18 May 05	Camp Pendleton Marine Corps Base— Oceanside, CA	0	45	0
18 May 05	18 May 05	Chandler High School—Chandler, AZ	0	100	0
18 May 05	18 May 05	Del Rio Elementary School—Chino Valley, AZ	0	8	0
18 May 05	18 May 05	Georgia Southern University—Statesboro, GA	0	36	0
18 May 05	18 May 05	Georgia Southern University—Statesboro, GA	0	43	0
18 May 05	18 May 05	Holy Trinity Catholic School— Colorado Springs, CO	0	40	0
18 May 05	18 May 05	Kannapolis Intimidators Stadium—Kannapolis, NC	0	3500	0
18 May 05	18 May 05	KDIN-TV, Channel 11/Des Moines—Johnston, IA	0	30	0
18 May 05	18 May 05	La Habra Kiwanis Club—La Habra, CA	0	16	0
18 May 05	18 May 05	Lincoln Middle School—Rockford, IL	0	155	0
18 May 05	18 May 05	Village Hall—Mukwonago, WI	0	23	0
18 May 05	19 May 05	Del Rio Elementary School—Chino Valley, AZ	0	100	0
18 May 05	19 May 05	Shaker Heights High School—Shaker Heights, OH	0	80	0
19 May 05	19 May 05	Archer School for Girls—Los Angeles, CA	0	35	0
19 May 05	19 May 05	Grand County Astronomical Society—Frasier, CO	0	20	0
19 May 05	19 May 05	Grand County Astronomical Society—Frasier, CO	0	34	0
19 May 05	19 May 05	Midvale Elementary School—Midvale, UT	0	55	0
19 May 05	19 May 05	Morton College—Cicero, IL	0	12	0
19 May 05	19 May 05	Otter Creek Park—Brandenburg, KY	0	25	0
19 May 05	19 May 05	Washington Middle School—Jamestown, NY	0	20	0
19 May 05	19 May 05	Wayside Cafe—Akron, OH	0	18	0
20 May 05	20 May 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
20 May 05	20 May 05	Arkansas Oklahoma Astronomical Society— Van Buren, AR	0	51	0

20 May 05	20 May 05	Boy Scouts of America (BSA) Muir District Camporee—Clayton, CA	0	120	0
20 May 05	20 May 05	Rocky Mountain Elementary School—Westminster, CO	0	75	0
20 May 05	20 May 05	San Miguel Elementary School—South Gate, CA	0	60	0
20 May 05	20 May 05	Star Light-Star Bright Observatory—Colorado Springs, CO	0	28	0
20 May 05	20 May 05	Volo Bog State Park—Ingleside, IL	0	40	0
20 May 05	20 May 05	Yuma Regional Medical Center—Yuma, AZ	0	4	0
20 May 05	27 May 05	"Middletown Times Star" Newspaper—Middletown, CA	0	2000	0
21 May 05	21 May 05	Crowell Chamber of Commerce and Comanche Springs—Crowell, TX	0	20	0
21 May 05	21 May 05	Driscoll Children's Hospital—Corpus Christi, TX	0	4	0
21 May 05	21 May 05	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	40	0
21 May 05	21 May 05	Havarah Tikva—Los Angeles, CA	0	40	0
21 May 05	21 May 05	Houston Community Center—Houston, PA	0	18	0
21 May 05	21 May 05	Johnson Elementary School—Munster, IN	0	72	0
21 May 05	21 May 05	Selfridge Air National Guard Base—Selfridge, MI	0	125	0
21 May 05	21 May 05	Tamke-Allan Observatory—Oak Ridge, TN	0	50	1000
21 May 05	22 May 05	New Jersey State Museum—Trenton, NJ	0	500	0
21 May 05	28 May 05	Norwalk Community College—Norwalk, CT	0	55	0
22 May 05	22 May 05	Cincinnati Observatory Center—Cincinnati, OH	0	150	0
23 May 05	23 May 05	Ames Elementary School—St. Paul, MN	0	75	0
23 May 05	23 May 05	Roseau Community School—Roseau, MN	0	12	0
23 May 05	23 May 05	Tupper Planetarium—Centereach, NY	0	50	0
24 May 05	24 May 05	Christian Medical Foundation—Tampa, FL	0	35	0
24 May 05	24 May 05	Civil Air Patrol TX 215—El Paso, TX	0	18	0
24 May 05	24 May 05	Common Threads Montessori—Santa Cruz, CA	0	35	0
24 May 05	24 May 05	Pritchett School—Buffalo Grove, IL	0	75	0
25 May 05	25 May 05	Odyssey Middle School—Mount Pleasant, MI	0	50	0
25 May 05	25 May 05	Worcester Jewish Community Center—Worcester, MA	0	34	0
25 May 05	26 May 05	Babb Middle School—Forest Park, GA	0	195	0
26 May 05	26 May 05	Atholton Elementary School—Crofton, MD	0	32	0
26 May 05	26 May 05	Ibrahim Elementary School—Winston-Salem, NC	0	180	0
26 May 05	26 May 05	Sebring Boy Scouts—Sebring, FL	0	35	0
26 May 05	26 May 05	St. Augustine High School—St. Augustine, FL	0	14000	0
26 May 05	26 May 05	Washington Middle School—Jamestown, NY	0	39	0
26 May 05	26 May 05	Wings Learning Resources—Citrus Heights, CA	0	11	0
26 May 05	27 May 05	Hilo Intermediate School—Hilo, HI	0	2000	0
27 May 05	27 May 05	Senior Citizen Center—Napa, CA	0	30	0
27 May 05	27 May 05	University of Cincinnati—Cincinnati, OH	0	100	0
27 May 05	27 May 05	Wilbur Cross Elementary School—Bridgeport, CT	0	100	0
27 May 05	27 May 05	Zion Lutheran School—Owego, NY	0	30	0
27 May 05	30 May 05	Doubletree Inn—San Jose, CA	0	4000	0
27 May 05	31 May 05	McKinley School—Owatonna, MN	0	120	0
28 May 05	28 May 05	Juan de Fuca Festival of the Arts—Port Angeles, WA	0	25	0
28 May 05	28 May 05	Plymouth State University—Plymouth, NH	0	20	0
28 May 05	28 May 05	Rice Lake State Park—Owatonna, MN	0	35	0
28 May 05	28 May 05	Towne East Mall—Wichita, KS	0	350	0
28 May 05	28 May 05	YMCA Camp Oakes—Riverside, CA	0	200	0
30 May 05	30 May 05	Ecole Marlborough Elementary School—Vancouver, Canada	0	100	0
30 May 05	30 May 05	Goodyear Manufacturing of Topeka—Topeka, KS	0	2500	0
31 May 05	31 May 05	Christian Medical Foundation—Tampa, FL	0	43	0
31 May 05	31 May 05	Discovery Museum—Bridgeport, CT	0	40	0
31 May 05	31 May 05	Munising Public Schools—Munising, MI	0	22	0
31 May 05	31 May 05	Owego Elementary School—Owego, NY	0	130	0
01 Jun 05	01 Jun 05	"Mahoning Valley Parent Magazine"—Youngstown, OH	0	55000	0
01 Jun 05	01 Jun 05	Georgia Southern University—Statesboro, GA	0	15	0
01 Jun 05	01 Jun 05	KSER Radio, 90.7 FM—Everett, WA	0	14000	0
01 Jun 05	01 Jun 05	Open Arms Child Development Center—Wichita, KS	0	140	0
01 Jun 05	28 Jun 05	Middle Creek Community Center—Cary, NC	0	300	0

01 Jun 05	30 Jun 05	Boise Astronomical Society—Boise, ID	0	80	0
01 Jun 05	30 Jun 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	679	0
01 Jun 05	30 Jun 05	Hyatt Regency Maui—Lahaina, HI	0	531	0
01 Jun 05	01 Jul 05	“Sky & Telescope” magazine—Cambridge, MA	0	100000	0
02 Jun 05	02 Jun 05	Bryce Canyon National Park—Bryce Canyon, UT	0	270	0
02 Jun 05	02 Jun 05	E.L.F. Children’s Center, Inc.—Wichita, KS	0	175	0
02 Jun 05	02 Jun 05	Georgia Southern University—Statesboro, GA	0	23	0
02 Jun 05	02 Jun 05	Loma Vista Elementary—Ventura, CA	0	75	0
02 Jun 05	30 Jun 05	Archbold Biological Station—Lake Placid, FL	0	90	0
03 Jun 05	03 Jun 05	“The Union-Recorder”—Milledgeville, GA	0	8500	0
03 Jun 05	03 Jun 05	Glendalough State Park—Battle Lake, MN	0	13040	0
03 Jun 05	03 Jun 05	Highcrest Middle School—Wilmette, IL	0	60	0
03 Jun 05	03 Jun 05	Highland Road Park Observatory— Baton Rouge, LA	0	57	0
03 Jun 05	03 Jun 05	Jordann Memorial Library—Larned, KS	0	200	0
03 Jun 05	03 Jun 05	Onan Observatory—Young America, MN	0	15	0
03 Jun 05	03 Jun 05	Rotary Sunshine Campus—Rochester, NY	0	45	0
03 Jun 05	03 Jun 05	Spokane Astronomical Society—Spokane, WA	0	20076	0
03 Jun 05	03 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	1000	300
03 Jun 05	05 Jun 05	Hope Conference Center—Hope, NJ	0	85	0
03 Jun 05	29 Jun 05	Georgia Southern University—Statesboro, GA	0	216	0
04 Jun 05	04 Jun 05	Crowell Chamber of Commerce and Comanche Springs—Crowell, TX	0	23	0
04 Jun 05	04 Jun 05	Derby Days Festival—Derby, KS	0	800	0
04 Jun 05	04 Jun 05	Explorit Science Center—Davis, CA	0	1055	0
04 Jun 05	04 Jun 05	Feather River College—Quincy, CA	0	25	0
04 Jun 05	04 Jun 05	Hartman Creek State Park—Waupaca, WI	0	45	0
04 Jun 05	04 Jun 05	Museum of Flight—Seattle, WA	0	60	0
04 Jun 05	04 Jun 05	Palomar Mountain Observatory Campground— Palomar Mountain, CA	0	40	0
04 Jun 05	04 Jun 05	Robeson Planetarium and Science Center— Lumberton, NC	0	130	0
04 Jun 05	04 Jun 05	Sedgwick County Zoo—Wichita, KS	0	1500	0
04 Jun 05	04 Jun 05	Tamke-Allan Observatory—Oak Ridge, TN	0	40	1000
04 Jun 05	04 Jun 05	Tulsa Rocket Club—Pawhuska, OK	0	350	0
05 Jun 05	05 Jun 05	Evansville Astronomical Society—Evansville, IN	0	85	0
05 Jun 05	05 Jun 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
05 Jun 05	05 Jun 05	Putney School—Putney, VT	0	60	0
05 Jun 05	05 Jun 05	St. Mark’s School of Texas—Dallas, TX	0	15	0
06 Jun 05	06 Jun 05	Fremont Astronomical Society—Long Beach, CA	0	27	0
06 Jun 05	06 Jun 05	Glendale Public Library—Glendale, AZ	0	45	0
06 Jun 05	06 Jun 05	Heyworth High School—Heyworth, IL	0	32	0
06 Jun 05	06 Jun 05	Rose Hill Youth Center—Rose Hill, KS	0	110	0
06 Jun 05	06 Jun 05	Tuttle Creek Lake—Manhattan, KS	0	100	0
06 Jun 05	06 Jun 05	Waterford School District—Waterford, MI	0	100	0
06 Jun 05	06 Jun 05	WKLE-TV, Channel 46/Lexington-Richmond— Lexington, KY	0	120	0
06 Jun 05	09 Jun 05	Estrella Mountain Community College— Avondale, AZ	0	60	0
06 Jun 05	10 Jun 05	Rio Vista Elementary School—San Bernardino, CA	0	375	0
06 Jun 05	17 Jun 05	Chouteau High School—Chouteau, OK	0	82	0
06 Jun 05	01 Jul 05	Genoa Middle School—Westerville, OH	0	120	0
07 Jun 05	07 Jun 05	KSIN-TV, Channel 27/Sioux City—Johnston, IA	0	65	0
07 Jun 05	07 Jun 05	Midlands Mathematics and Science Regional Center—Orangeburg, SC	0	25	0
07 Jun 05	07 Jun 05	Tutor Time Child Development Center— Wichita, KS	0	125	0
08 Jun 05	08 Jun 05	Apple Valley Rotary Club—Apple Valley, MN	0	80	0
08 Jun 05	08 Jun 05	Cleburne Independent School District Board Room—Cleburne, TX	0	25	0
08 Jun 05	08 Jun 05	Diablo View Middle School—Clayton, CA	0	180	0
08 Jun 05	08 Jun 05	Eisenhower Observatory—Hopkins, MN	0	15	0
08 Jun 05	08 Jun 05	Georgia Southern University—Statesboro, GA	0	17	0
08 Jun 05	08 Jun 05	Humboldt State University—Arcata, CA	0	20	0
08 Jun 05	08 Jun 05	Lodge Elementary School—Evansville, IN	0	24	0
09 Jun 05	09 Jun 05	Delta College—University Center, MI	0	42	0
09 Jun 05	09 Jun 05	Lawrence Intermediate School—Lawrenceville, NJ	0	60	0

09 Jun 05	09 Jun 05	Salt Water Grille—South Portland, ME	0	20	0
09 Jun 05	09 Jun 05	Urban Astronomers Club—Milwaukee, WI	0	18	0
10 Jun 05	10 Jun 05	Embassy Suites Hotel—Newark, DE	0	50	0
10 Jun 05	10 Jun 05	Georgia Southern University—Statesboro, GA	0	66	0
10 Jun 05	10 Jun 05	Pinckney Hall at Sun City—Bluffton, SC	0	50	0
10 Jun 05	10 Jun 05	Trinity Parish—Menlo Park, CA	0	25	0
10 Jun 05	10 Jun 05	WKMA-TV, Channel 35/Madisonville— Lexington, KY	0	600	0
10 Jun 05	11 Jun 05	Boonshoft Museum of Discovery—Dayton, OH	0	352	0
10 Jun 05	12 Jun 05	Comanche Springs—Crowell, TX	0	20	0
11 Jun 05	11 Jun 05	Clark Memorial Community Center— Winchendon, MA	0	125	0
11 Jun 05	11 Jun 05	Duckon Science Fiction Convention— Naperville, IL	0	14	0
11 Jun 05	11 Jun 05	LeConte Memorial Lodge—Yosemite, CA	0	36	0
11 Jun 05	11 Jun 05	Onan Observatory—Young America, MN	0	150	0
11 Jun 05	11 Jun 05	Prince William County Central Library— Manassas, VA	0	1038	0
11 Jun 05	11 Jun 05	Rustic Cottage Resorts—Tahoe Vista, CA	0	43	0
11 Jun 05	11 Jun 05	WKOH-TV, Channel 31/Owensboro-Henderson— Lexington, KY	0	75	0
12 Jun 05	12 Jun 05	Blessed Sacrament Church—Wichita, KS	0	450	0
12 Jun 05	12 Jun 05	Rutland Rock & Mineral Club—Rutland, VT	0	20	0
12 Jun 05	12 Jun 05	WMSY-TV, Channel 52/Marion—Roanoke, VA	0	36	0
13 Jun 05	13 Jun 05	Chesapeake Public Schools—Chesapeake, VA	0	180	0
13 Jun 05	13 Jun 05	Civil Air Patrol TX 215—El Paso, TX	0	18	0
13 Jun 05	13 Jun 05	Grace Lutheran Church—Salisbury, NC	0	150	0
13 Jun 05	13 Jun 05	Star Light-Star Bright Observatory— Colorado Springs, CO	0	12	0
13 Jun 05	14 Jun 05	Brownsville Public Library—Brownsville, TX	0	56	0
13 Jun 05	17 Jun 05	Shaker Heights High School—Shaker Heights, OH	0	24	0
13 Jun 05	21 Jul 05	St. Mark's School of Texas—Dallas, TX	0	750	0
14 Jun 05	14 Jun 05	Botanic Garden—Des Moines, IA	0	46	0
14 Jun 05	14 Jun 05	Children's Discovery Center—Andover, KS	0	120	0
14 Jun 05	14 Jun 05	Children's Discovery Center—Andover, KS	0	125	0
14 Jun 05	14 Jun 05	Discovery Science Center—Santa Ana, CA	0	15	0
14 Jun 05	14 Jun 05	Miami University—Oxford, OH	0	70	0
14 Jun 05	14 Jun 05	Princeton University—Princeton, NJ	0	40	0
14 Jun 05	14 Jun 05	Terra Bella Lions—Terra Bella, CA	0	21	0
14 Jun 05	14 Jun 05	University of North Texas—Denton, TX	0	35	0
15 Jun 05	15 Jun 05	Assumption Public Library—Assumption, IL	0	75	0
15 Jun 05	15 Jun 05	C.T. Sewell Elementary School—Henderson, NV	0	60	0
15 Jun 05	15 Jun 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
15 Jun 05	15 Jun 05	Moweaqua Public Library—Moweaqua, IL	0	75	0
15 Jun 05	15 Jun 05	University of Wisconsin-Fox Valley—Menasha, WI	0	19	0
15 Jun 05	15 Jun 05	West Branch Library—Evansville, IN	0	15	0
15 Jun 05	17 Jun 05	Springfield College—Springfield, MA	0	75	0
15 Jun 05	22 Jun 05	University of Texas at Austin—Austin, TX	0	160	0
16 Jun 05	16 Jun 05	Brownsville Public Library—Brownsville, TX	0	47	0
16 Jun 05	16 Jun 05	Grand County Astronomical Society—Frasier, CO	0	18	0
16 Jun 05	16 Jun 05	Macey's Little Theatre-Orem—Orem, UT	0	30	0
16 Jun 05	16 Jun 05	Morton College—Cicero, IL	0	9	0
16 Jun 05	16 Jun 05	Starburst Meadows Observatory—Brunswick, ME	0	60	0
16 Jun 05	17 Jun 05	Muncie Airport—Muncie, IN	0	1500	0
16 Jun 05	17 Jun 05	San Luis Obispo County Office— San Luis Obispo, CA	0	157	0
17 Jun 05	17 Jun 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
17 Jun 05	17 Jun 05	Anchorage Town Square—Anchorage, AK	0	500	0
17 Jun 05	17 Jun 05	Central Library—Evansville, IN	0	5	0
17 Jun 05	17 Jun 05	Moorpark College—Moorpark, CA	0	150	0
17 Jun 05	17 Jun 05	Owego Apalachin Middle School—Owego, NY	0	150	0
17 Jun 05	17 Jun 05	Virginia Department of Education—Richmond, VA	0	50	0
17 Jun 05	17 Jun 05	Volo Bog State Park—Ingleside, IL	0	55	0
17 Jun 05	17 Jun 05	Volo Bog State Park—Ingleside, IL	0	60	0
18 Jun 05	18 Jun 05	Barnes & Noble Bookstore—Oceanside, CA	0	50	0
18 Jun 05	18 Jun 05	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	100	0
18 Jun 05	18 Jun 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1000

18 Jun 05	18 Jun 05	The Palms Retirement Center— San Luis Obispo, CA	0	25	0
18 Jun 05	18 Jun 05	University of Calgary—Calgary, Canada	0	2000	0
19 Jun 05	19 Jun 05	Chatham Public Library—Chatham, IL	0	50	0
19 Jun 05	22 Jun 05	Society of Amateur Radio Astronomers— Green Bank, WV	0	60	3100
19 Jun 05	24 Jun 05	Boy Scout Camp Mataguay—Santa Ysabel, CA	0	65	0
20 Jun 05	20 Jun 05	Harding University—Searcy, AR	0	32	0
20 Jun 05	20 Jun 05	La Petite Academy—Wichita, KS	0	115	0
20 Jun 05	20 Jun 05	Morrow Observatory—Bedford, IN	0	19	0
20 Jun 05	20 Jun 05	NASA Ames Research Center—Moffett Field, CA	0	25	0
20 Jun 05	20 Jun 05	Oaklyn Library—Evansville, IN	0	28	0
20 Jun 05	20 Jun 05	WQAL Radio, 104.1 FM/Cleveland—Cleveland, OH	0	5000	0
20 Jun 05	24 Jun 05	Mesita Elementary School—El Paso, TX	0	32	0
21 Jun 05	21 Jun 05	Blue Island Library—Blue Island, IL	0	107	0
21 Jun 05	21 Jun 05	Blue Mound Public Library—Blue Mound, IL	0	40	0
21 Jun 05	21 Jun 05	Camp Pendleton Marine Corps Base— Oceanside, CA	0	45	0
21 Jun 05	21 Jun 05	Kelly's on the Bay—Key Largo, FL	0	15	0
21 Jun 05	21 Jun 05	National Teacher Training Institute— Harrisonburg, VA	0	13	0
21 Jun 05	21 Jun 05	North Park Library—Evansville, IN	0	24	0
21 Jun 05	21 Jun 05	South Macon Public Library—Macon, IL	0	40	0
21 Jun 05	21 Jun 05	The Boeing Company—Huntington Beach, CA	0	25	0
21 Jun 05	21 Jun 05	Tucker Reid H. Cofer Library—Tucker, GA	0	25	0
21 Jun 05	22 Jun 05	Fresno Pacific University—Bakersfield, CA	0	32	0
21 Jun 05	23 Jun 05	Santa Cruz Institute for Particle Physics— Santa Cruz, CA	0	400	0
22 Jun 05	22 Jun 05	Florida Memorial College—Miami, FL	0	35	0
22 Jun 05	22 Jun 05	Sycamore Cub Scouts—McHenry, IL	0	212	0
22 Jun 05	20 Sep 05	Museum of Science and History—Jacksonville, FL	0	7100	0
23 Jun 05	23 Jun 05	"Bowie Blade-News"—Bowie, MD	0	50000	0
23 Jun 05	23 Jun 05	Camp Torqua—Edwardsville, IL	0	50	0
23 Jun 05	23 Jun 05	Cross and Crown Church—Roscoe, IL	0	40	0
23 Jun 05	23 Jun 05	Davis County Library—Bountiful, UT	0	30	0
23 Jun 05	23 Jun 05	Florida Gulf Coast University—Fort Myers, FL	0	35	0
23 Jun 05	23 Jun 05	Ford Amateur Astronomy Club—Dearborn, MI	0	60	0
23 Jun 05	23 Jun 05	Gail Borden Public Library—Elgin, IL	0	30	0
23 Jun 05	23 Jun 05	Georgia Southern University—Statesboro, GA	0	30	0
23 Jun 05	23 Jun 05	Lockheed Martin's Space Exploration Vision Center—Alexandria, VA	0	25	0
23 Jun 05	23 Jun 05	The Boeing Company—El Segundo, CA	0	29	0
23 Jun 05	24 Jun 05	Sycamore Cub Scouts—McHenry, IL	0	212	0
24 Jun 05	24 Jun 05	Putney School—Putney, VT	0	400	0
24 Jun 05	24 Jun 05	Rector Community Center—Rector, AR	0	35	0
24 Jun 05	24 Jun 05	Schoonover Observatory—Lima, OH	0	65	0
24 Jun 05	24 Jun 05	Simpson Observatory—Titusville, NJ	0	40	0
24 Jun 05	24 Jun 05	WNIR Radio, 100.1 FM/Akron—Akron, OH	0	2000	0
25 Jun 05	25 Jun 05	Aldrich Astronomical Society—Paxton, MA	0	15	0
25 Jun 05	25 Jun 05	Battle Ground Lake State Park—Battle Ground, WA	0	12	0
25 Jun 05	25 Jun 05	Beverly Public Library—Beverly, MA	0	15	0
25 Jun 05	25 Jun 05	Eastwood Mall—Niles, OH	0	300	0
25 Jun 05	25 Jun 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	200	0
25 Jun 05	25 Jun 05	Fuller Brush Corporation—Great Bend, KS	0	950	0
25 Jun 05	25 Jun 05	Gale Free Library—Holden, MA	0	28	0
25 Jun 05	25 Jun 05	Highlands Ranch Library—Highlands Ranch, CO	0	26	0
25 Jun 05	25 Jun 05	Museum of Natural History and Planetarium— Providence, RI	0	75	0
25 Jun 05	25 Jun 05	Palomar Mountain Observatory Campground— Palomar Mountain, CA	0	300	0
25 Jun 05	25 Jun 05	Riparian Institute—Gilbert, AZ	0	200	0
25 Jun 05	25 Jun 05	Seagrave Memorial Observatory— North Scituate, RI	0	25	0
25 Jun 05	25 Jun 05	Sky Meadows State Park—Delaplane/Paris, VA	0	158	0
25 Jun 05	25 Jun 05	Star Party—Louisbourg, KS	0	55	0
25 Jun 05	28 Jun 05	Gale Free Library—Holden, MA	0	117	0

26 Jun 05	26 Jun 05	Maine School Administrative District 55— Hiram, ME	0	35	0
26 Jun 05	26 Jun 05	Maine School Administrative District 55— Hiram, ME	0	145	0
26 Jun 05	26 Jun 05	Rochester Public Library—Rochester, IL	0	75	0
26 Jun 05	26 Jun 05	Warren City Fairgrounds—Warren, NJ	0	26	0
27 Jun 05	27 Jun 05	Georgia Southern University—Statesboro, GA	0	34	0
27 Jun 05	27 Jun 05	Tryon Estates—Columbus, NC	0	15	0
27 Jun 05	27 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	100	200
27 Jun 05	01 Jul 05	Horizons Unlimited—Salisbury, NC	0	75	0
27 Jun 05	01 Jul 05	Middlesex Middle School—Darien, CT	0	68	0
27 Jun 05	02 Jul 05	Tesomas Scout Camp—Rhineland, WI	0	35	0
27 Jun 05	09 Jul 05	Bruneau Dunes Observatory— Mountain Home, ID	0	228	0
28 Jun 05	28 Jun 05	Camp Ojiketa—Chisago City, MN	0	35	0
28 Jun 05	28 Jun 05	Georgia Southern University—Statesboro, GA	0	76	0
28 Jun 05	28 Jun 05	Hispanic Office of Planning and Evaluation— Jamaica Plain, MA	0	73	0
28 Jun 05	28 Jun 05	Madeira Public Library—Cincinnati, OH	0	30	0
28 Jun 05	28 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	100	200
28 Jun 05	28 Jun 05	WCPN Radio, 90.3 FM/Cleveland—Cleveland, OH	0	45000	0
28 Jun 05	30 Jun 05	Polk County High School—Columbus, NC	0	16	0
29 Jun 05	29 Jun 05	High Peaks Elementary School—Boulder, CO	0	12	0
29 Jun 05	29 Jun 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
29 Jun 05	29 Jun 05	Sycamore Cub Scouts—McHenry, IL	0	260	0
29 Jun 05	29 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	50	0
29 Jun 05	29 Jun 05	Warner Park Visitor Center—Nashville, TN	0	115	0
29 Jun 05	30 Jun 05	Sycamore Cub Scouts—McHenry, IL	0	260	0
30 Jun 05	30 Jun 05	Camp Torqua—Edwardsville, IL	0	80	0
30 Jun 05	30 Jun 05	Georgia Southern University—Statesboro, GA	0	5	0
30 Jun 05	30 Jun 05	Little Gym—Snellville, GA	0	25	0
30 Jun 05	30 Jun 05	Macey's Little Theatre—West Jordan, UT	0	30	0
30 Jun 05	30 Jun 05	Tar River Astronomy Club—Rocky Mount, NC	0	40	0
30 Jun 05	30 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	100	200
30 Jun 05	30 Jun 05	WSPD Radio, 1370 AM/Toledo—Toledo, OH	0	75000	0
30 Jun 05	01 Jul 05	Suffolk County Community College—Selden, NY	0	50	0
01 Jul 05	01 Jul 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
01 Jul 05	01 Jul 05	WNIR Radio, 100.1 FM/Akron—Akron, OH	0	20000	0
01 Jul 05	29 Jul 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	729	0
01 Jul 05	31 Jul 05	Hyatt Regency Maui—Lahaina, HI	0	696	0
01 Jul 05	31 Jul 05	Idaho Public Television—Boise, ID	0	60000	0
02 Jul 05	02 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	82	0
02 Jul 05	02 Jul 05	Fernbank Science Center—Atlanta, GA	0	100	0
02 Jul 05	02 Jul 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
02 Jul 05	02 Jul 05	Patterson Community Sports Park—Patterson, CA	0	50	0
02 Jul 05	02 Jul 05	Rice Lake State Park—Owatonna, MN	0	35	0
02 Jul 05	02 Jul 05	Seagrave Memorial Observatory— North Scituate, RI	0	35	0
02 Jul 05	02 Jul 05	Sunriver Nature Center and Observatory— Sunriver, OR	0	220	0
02 Jul 05	02 Jul 05	Tamke-Allan Observatory—Oak Ridge, TN	0	50	1000
02 Jul 05	02 Jul 05	White Mountains Campground—Chatham, NH	0	6	0
02 Jul 05	16 Jul 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	60	0
03 Jul 05	04 Jul 04	WOUC-TV, Channel 44/Cambridge—Athens, OH	0	50	0
03 Jul 05	03 Jul 05	"The Plain Dealer"—Cleveland, OH	0	223000	0
03 Jul 05	03 Jul 05	Bishop Museum—Honolulu, HI	0	5000	0
03 Jul 05	03 Jul 05	Chabot Space and Science Center—Oakland, CA	0	455	0
03 Jul 05	03 Jul 05	Chartiers-Houston Community Library— Houston, PA	0	35	0
03 Jul 05	03 Jul 05	Citrus College—Glendora, CA	0	1209	0
03 Jul 05	03 Jul 05	Hispanic Office of Planning and Evaluation— Lawrence, MA	0	28	0
03 Jul 05	03 Jul 05	KPIX-TV, Channel 5/San Francisco— San Francisco, CA	0	100000	0

03 Jul 05	03 Jul 05	Maui Community College— Kaahumanu-Kahului, HI	0	1700	0
03 Jul 05	03 Jul 05	Mount Evans Observatory—Idaho Springs, CO	0	30	0
03 Jul 05	03 Jul 05	Skyline Wilderness Park—Napa, CA	0	33	0
03 Jul 05	03 Jul 05	Sunriver Nature Center and Observatory— Sunriver, OR	0	400	0
03 Jul 05	03 Jul 05	Tech Museum of Innovation—San Jose, CA	0	50	0
03 Jul 05	03 Jul 05	University of Hawaii at Hilo—Hilo, HI	0	1100	600
03 Jul 05	03 Jul 05	Waikiki Beach—Honolulu, HI	0	10000	0
03 Jul 05	03 Jul 05	WDOK Radio, 102.1 FM/Cleveland—Cleveland, OH	0	5000	0
03 Jul 05	03 Jul 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	500000
03 Jul 05	03 Jul 05	Wyoming State Science Fair—Laramie, WY	0	500	1000
03 Jul 05	04 Jul 05	Berkley Gardens Elementary School— Westminster, CO	0	500	0
03 Jul 05	04 Jul 05	Denver Museum of Nature and Science— Denver, CO	0	600	0
03 Jul 05	04 Jul 05	Hyatt Regency Maui—Lahaina, HI	0	75	0
03 Jul 05	04 Jul 05	Star Light-Star Bright Observatory— Colorado Springs, CO	0	60	0
03 Jul 05	04 Jul 05	University of Maryland—College Park, MD	0	100	0
03 Jul 05	04 Jul 05	WJCT-TV, Channel 7/Jacksonville— Jacksonville, FL	0	5	0
03 Jul 05	06 Jul 05	Camp Reeves—Robbins, NC	0	275	0
04 Jul 05	04 Jul 05	Dyer Observatory—Brentwood, TN	0	60040	53500
04 Jul 05	04 Jul 05	Imagiverse Educational Consortium— Camarillo, CA	0	0	28700
04 Jul 05	04 Jul 05	Minnetrista Cultural Center—Muncie, IN	0	2000	0
04 Jul 05	04 Jul 05	University of North Carolina at Pembroke— Pembroke, NC	0	6	0
04 Jul 05	04 Jul 05	WKYC-TV, Channel 3/Cleveland—Cleveland, OH	0	156000	0
04 Jul 05	04 Jul 05	WNIR Radio, 100.1 FM/Akron—Akron, OH	0	25000	0
04 Jul 05	04 Jul 05	WOIO-TV, Channel 19/Cleveland—Cleveland, OH	0	125000	0
04 Jul 05	04 Jul 05	WSPD Radio, 1370 AM/Toledo—Toledo, OH	0	75000	0
04 Jul 05	04 Jul 05	WTAM Radio, 1100 AM/Cleveland—Cleveland, OH	0	85000	0
04 Jul 05	04 Jul 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	500000
04 Jul 05	05 Jul 05	Bonny Doon Observing Site—Santa Cruz, CA	0	14	0
04 Jul 05	07 Jul 05	Calusa Nature Center and Planetarium— Fort Myers, FL	0	45	0
04 Jul 05	15 Jul 05	Deep Space Network—Madrid, Spain	0	30	0
05 Jul 05	05 Jul 05	Camp Cromwell—Bridgewater, NJ	0	15	0
05 Jul 05	05 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	72	0
05 Jul 05	05 Jul 05	Georgia Southern University—Statesboro, GA	0	100190	0
05 Jul 05	05 Jul 05	Imagiverse Educational Consortium— Camarillo, CA	0	28700	0
05 Jul 05	05 Jul 05	KSAZ-TV, Channel 10/Phoenix—Phoenix, AZ	0	500000	0
05 Jul 05	05 Jul 05	Milledgeville Kiwanis—Milledgeville, GA	0	66	0
05 Jul 05	05 Jul 05	Whiteside Mamie Elementary School— Mount Pleasant, SC	0	500000	0
05 Jul 05	08 Jul 05	Middlesex Middle School—Darien, CT	0	53	0
05 Jul 05	08 Jul 05	Rio Vista Elementary School—San Bernardino, CA	0	375	0
05 Jul 05	09 Jul 05	Robeson Planetarium and Science Center— Lumberton, NC	0	200	0
06 Jul 05	06 Jul 05	“The Plain Dealer”—Cleveland, OH	0	223000	0
06 Jul 05	06 Jul 05	“The Union-Recorder”—Milledgeville, GA	0	8500	0
06 Jul 05	06 Jul 05	Adelphia Cable-Crossroads Community Forum— Buffalo, NY	0	650	0
06 Jul 05	06 Jul 05	Camp Cromwell—Bridgewater, NJ	0	17	0
06 Jul 05	06 Jul 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
06 Jul 05	10 Jul 05	Mount Bachelor Star Party—Sunriver, OR	0	400	0
07 Jul 05	07 Jul 05	Franklin Institute Science Museum— Philadelphia, PA	0	72	0
07 Jul 05	07 Jul 05	Lily Pond Country Day School—Rivervale, NJ	0	100	0
07 Jul 05	07 Jul 05	Museum of Science and Industry—Tampa, FL	0	12	0
07 Jul 05	07 Jul 05	Vanderbilt University—Nashville, TN	0	75	0
07 Jul 05	07 Jul 05	Wellington Wheatland Festival—Wellington, KS	0	375	0

07 Jul 05	14 Sep 05	Georgia Southern University—Statesboro, GA	0	1207	0
08 Jul 05	08 Jul 05	Coquina Crossing—Elkton, FL	0	27	0
08 Jul 05	08 Jul 05	Cub Scout Twilight Camp—Rockford, IL	0	75	0
08 Jul 05	08 Jul 05	Hamburg Natural Historical Society—Hamburg, NY	0	40	0
08 Jul 05	08 Jul 05	Highland Road Park Observatory— Baton Rouge, LA	0	105	0
08 Jul 05	08 Jul 05	St. Augustine High School—St. Augustine, FL	0	12	0
09 Jul 05	09 Jul 05	Buffalo Museum of Science—Buffalo, NY	0	26	0
09 Jul 05	09 Jul 05	Buffalo Museum of Science—Buffalo, NY	0	34	0
09 Jul 05	09 Jul 05	Hawaii Community College—Hilo, HI	0	1100	0
09 Jul 05	09 Jul 05	Lockwood Park Observatory—Rockford, IL	0	75	0
09 Jul 05	09 Jul 05	Putney School—Putney, VT	0	60	0
09 Jul 05	09 Jul 05	Putney School—Putney, VT	0	80	0
10 Jul 05	10 Jul 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
10 Jul 05	15 Jul 05	Cuyahoga Valley Environmental Education Center—Peninsula, OH	0	42	0
11 Jul 05	11 Jul 05	Camp Cromwell—Bridgewater, NJ	0	16	0
11 Jul 05	11 Jul 05	Civil Air Patrol TX 215—El Paso, TX	0	17	0
11 Jul 05	11 Jul 05	Queen Anne School—Upper Marlboro, MD	0	34	0
11 Jul 05	15 Jul 05	Middlesex Middle School—Darien, CT	0	39	0
11 Jul 05	15 Jul 05	NASA Johnson Space Center—Houston, TX	0	33	0
11 Jul 05	15 Jul 05	Tamke-Allan Observatory—Oak Ridge, TN	0	19	1400
11 Jul 05	22 Jul 05	Georgia College & State University— Milledgeville, GA	0	46	0
12 Jul 05	12 Jul 05	All-Saints Child Care Center—Wichita, KS	0	150	0
12 Jul 05	12 Jul 05	Brownsville Public Library—Brownsville, TX	0	200	0
12 Jul 05	12 Jul 05	Bryce Canyon National Park—Bryce Canyon, UT	0	130	0
12 Jul 05	12 Jul 05	Bryce Canyon National Park—Bryce Canyon, UT	0	150	0
12 Jul 05	12 Jul 05	Derby Creation Station—Derby, KS	0	80	0
12 Jul 05	12 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	119	0
12 Jul 05	12 Jul 05	Lancaster Youth Bureau—Lancaster, NY	0	36	0
13 Jul 05	13 Jul 05	City of Independence Civic Center— Independence, OH	0	56	0
13 Jul 05	13 Jul 05	Horizons School, Boulder, CO	0	27	0
13 Jul 05	13 Jul 05	Hue University—Hue City, Vietnam	0	32	0
13 Jul 05	13 Jul 05	Pasadena Independent School District— Pasadena, TX	0	50	0
13 Jul 05	13 Jul 05	Sanderling Nature Center—Sheboygan, WI	0	45	0
13 Jul 05	13 Jul 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	500000
13 Jul 05	14 Jul 05	Huntley Cub Scouts—Huntley, IL	0	195	0
14 Jul 05	14 Jul 05	Cankdeska Cikana Community College— Fort Totten, ND	0	36	0
14 Jul 05	14 Jul 05	Challenger Space Center—Peoria, AZ	0	120	0
14 Jul 05	14 Jul 05	Florida Memorial College—Miami, FL	0	24	0
14 Jul 05	14 Jul 05	Joyful Noise Academy—Wichita, KS	0	130	0
14 Jul 05	14 Jul 05	Lancaster Youth Bureau—Lancaster, NY	0	26	0
14 Jul 05	14 Jul 05	Onan Observatory—Young America, MN	0	75	0
14 Jul 05	14 Jul 05	University of California, Santa Cruz— Santa Cruz, CA	0	44	0
15 Jul 05	15 Jul 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
15 Jul 05	15 Jul 05	Highland Road Park Observatory— Baton Rouge, LA	0	57	0
15 Jul 05	15 Jul 05	Northbrook Park District—Northbrook, IL	0	30	0
15 Jul 05	15 Jul 05	St. Mary's Church—Batesville, AR	0	75	0
15 Jul 05	22 Jul 05	"Middletown Times Star" Newspaper— Middletown, CA	0	2000	0
15 Jul 05	02 Sep 05	Bruneau Dunes Observatory— Mountain Home, ID	0	522	0
16 Jul 05	16 Jul 05	Anderson Public Library—Cincinnati, OH	0	50	0
16 Jul 05	16 Jul 05	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	50	0
16 Jul 05	16 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	121	0
16 Jul 05	16 Jul 05	KCWY-TV, Channel 13/Casper—Casper, WY	0	20000	0
16 Jul 05	16 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	2	0

16 Jul 05	16 Jul 05	South Carolina Governor's School for Science and Mathematics—Hartsville, SC	0	25	0
16 Jul 05	16 Jul 05	Tamke-Allan Observatory—Oak Ridge, TN	0	90	1600
17 Jul 05	17 Jul 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
17 Jul 05	17 Jul 05	Monroe County Fair—Rochester, NY	0	50	0
17 Jul 05	22 Jul 05	Plymouth State University—Plymouth, NH	0	30	0
18 Jul 05	18 Jul 05	Glendale Public Library—Glendale, AZ	0	41	0
18 Jul 05	18 Jul 05	Morrow Observatory—Bedford, IN	0	19	0
18 Jul 05	19 Jul 05	Brooke Hills Park—Wellsburg, WV	0	145	0
18 Jul 05	22 Jul 05	4-H and Youth Development—Austin, TX	0	115	0
18 Jul 05	22 Jul 05	Middlesex Middle School—Darien, CT	0	29	0
18 Jul 05	22 Jul 05	Oak Park—Simi Valley, CA	0	452	0
18 Jul 05	22 Jul 05	Pennsylvania State University, Behrend-College for Kids—Erie, PA	0	31	0
19 Jul 05	19 Jul 05	Boonshoft Museum of Discovery—Dayton, OH	0	50	0
20 Jul 05	20 Jul 05	Derby Kindercare—Derby, KS	0	70	0
20 Jul 05	20 Jul 05	Discovery Center of Idaho—Boise, ID	0	12	0
20 Jul 05	20 Jul 05	Marine Corps Reserve Training Center—Pico Rivera, CA	0	15	0
20 Jul 05	20 Jul 05	Mission Trails Regional Park—San Diego, CA	0	52	0
20 Jul 05	20 Jul 05	Shrewsbury Public Library—Shrewsbury, MA	0	77	0
20 Jul 05	20 Jul 05	Telequebec—Montreal, Canada	0	35	0
20 Jul 05	20 Jul 05	Veterans of Foreign Wars—Louisville, CO	0	25	0
20 Jul 05	20 Jul 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500000	500000
21 Jul 05	21 Jul 05	Erie Shores Girl Scout Camp—Lorain, OH	0	19	0
21 Jul 05	21 Jul 05	Morton College—Cicero, IL	0	11	0
21 Jul 05	21 Jul 05	Natural Science Center—Greensboro, NC	0	12	0
22 Jul 05	22 Jul 05	Camp Torqua—Edwardsville, IL	0	60	0
22 Jul 05	22 Jul 05	Museum of Science and History—Jacksonville, FL	0	800	0
22 Jul 05	22 Jul 05	Richland College Planetarium—Dallas, TX	0	175	0
22 Jul 05	22 Jul 05	Rochester Museum & Science Center—Rochester, NY	0	150	0
22 Jul 05	22 Jul 05	Spanish Fork Maceys—Spanish Fork, UT	0	50	0
23 Jul 05	23 Jul 05	Ann Arbor Art Fair—Ann Arbor, MI	0	200	0
23 Jul 05	23 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	126	0
23 Jul 05	23 Jul 05	WLPB-TV, Channel 27/Baton Rouge—Baton Rouge, LA	0	20	0
23 Jul 05	30 Jul 05	Space Foundation—Colorado Springs, CO	0	100	0
25 Jul 05	25 Jul 05	Camp Cromwell—Bridgewater, NJ	0	15	0
25 Jul 05	25 Jul 05	University of North Texas—Denton, TX	0	250004	0
25 Jul 05	04 Aug 05	Salamanca Youth Bureau—Salamanca, NY	0	10	0
26 Jul 05	26 Jul 05	Batavia Youth Bureau—Batavia, NY	0	140	0
26 Jul 05	26 Jul 05	East Carolina University—Greenville, NC	0	90	0
26 Jul 05	26 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	153	0
26 Jul 05	26 Jul 05	G.WIZ-The Hands-On Science Museum—Sarasota, FL	0	50	0
26 Jul 05	26 Jul 05	Haili Christian School—Hilo, HI	0	10000	0
26 Jul 05	26 Jul 05	Kindercare—Wichita, KS	0	94	0
26 Jul 05	26 Jul 05	Live Oaks—Milford, OH	0	80	0
26 Jul 05	26 Jul 05	Westlink Christian Child Care—Wichita, KS	0	230	0
26 Jul 05	26 Jul 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500000	100000
27 Jul 05	27 Jul 05	Challenger Space Center—Peoria, AZ	0	105	0
27 Jul 05	27 Jul 05	Humboldt State University—Arcata, CA	0	24	0
28 Jul 05	28 Jul 05	Alexandria Zoological Park—Alexandria, LA	0	60	0
28 Jul 05	28 Jul 05	Indian River Community College Planetarium—Fort Pierce, FL	0	28	0
28 Jul 05	28 Jul 05	Tamke-Allan Observatory—Oak Ridge, TN	0	12	0
28 Jul 05	28 Jul 05	WMFE-TV, Channel 24/Orlando—Orlando, FL	0	40	0
28 Jul 05	28 Jul 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500000	100000
29 Jul 05	29 Jul 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
29 Jul 05	29 Jul 05	Camp Wente—Willits, CA	0	12	0
29 Jul 05	29 Jul 05	Condit Exhibits—Denver, CO	0	21	0
29 Jul 05	29 Jul 05	KUAS-TV, Channel 27/Tucson—Tucson, AZ	0	25	0

29 Jul 05	29 Jul 05	Oakland Schools Science, Mathematics and Technology Center—Waterford, MI	0	35	0
29 Jul 05	29 Jul 05	Pennsylvania State University—University Park, PA	0	27	0
29 Jul 05	29 Jul 05	WUFT-TV, Channel 5/Gainesville—Gainesville, FL	0	25	0
29 Jul 05	30 Jul 05	Comanche Springs—Crowell, TX	0	11	0
29 Jul 05	30 Jul 05	Comanche Springs—Crowell, TX	0	27	0
30 Jul 05	30 Jul 05	Bay Shore Public Library—Long Beach, CA	0	12	0
30 Jul 05	30 Jul 05	Big South Fork National River and Recreation Area—Oneida, TN	0	130	0
30 Jul 05	30 Jul 05	Farmers Market, Copia, Mondavi Food, Wine, and Art Center—Napa, CA	0	125	0
30 Jul 05	30 Jul 05	Johnson County Park—Edinburgh, IN	0	50	0
30 Jul 05	30 Jul 05	KMOS-TV, Channel 6/Sedalia—Warrensburg, MO	0	6	0
30 Jul 05	30 Jul 05	KUAT-TV, Channel 6/Tucson—Tucson, AZ	0	100	0
30 Jul 05	30 Jul 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500	100000
31 Jul 05	31 Jul 05	Manalapan High School—Manalapan, NJ	0	36	0
01 Aug 05	03 Aug 05	Arizona State University—Tempe, AZ	0	106	100
01 Aug 05	31 Aug 05	Hyatt Regency Maui—Lahaina, HI	0	740	0
01 Aug 05	30 Sep 05	Holden Community Television—Holden, MA	0	10000	0
02 Aug 05	02 Aug 05	Buffalo Museum of Science—Buffalo, NY	0	22	0
02 Aug 05	02 Aug 05	Jericho Christian Academy-Elementary School—Landover, MD	0	31	0
02 Aug 05	02 Aug 05	Naperville Astronomical Association—Naperville, IL	0	70	0
03 Aug 05	03 Aug 05	Choctaw Tribal Schools—Philadelphia, MS	0	7	0
03 Aug 05	03 Aug 05	Via Christi Hospital Child Development Center—Wichita, KS	0	145	0
03 Aug 05	03 Aug 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500000	100000
03 Aug 05	04 Aug 05	KLAS-TV, Channel 8/Las Vegas—Las Vegas, NV	0	100	0
04 Aug 05	04 Aug 05	Buffalo Museum of Science—Buffalo, NY	0	25	0
04 Aug 05	04 Aug 05	KSIN-TV, Channel 27/Sioux City—Johnston, IA	0	85	0
04 Aug 05	04 Aug 05	Macey's Little Theatre—West Jordan, UT	0	20	0
04 Aug 05	04 Aug 05	Texas Tech University—Lubbock, TX	0	41	0
04 Aug 05	04 Aug 05	WDOK Radio, 102.1 FM/Cleveland—Cleveland, OH	0	5000	0
05 Aug 05	05 Aug 05	Garfield Elementary School—Alhambra, CA	0	100	0
05 Aug 05	05 Aug 05	Spokane Astronomical Society—Spokane, WA	0	100	0
05 Aug 05	05 Aug 05	University of Hawaii at Hilo—Hilo, HI	0	100	0
05 Aug 05	06 Aug 05	WKDP-TV, Channel 29/Paducah—Lexington, KY	0	125	0
06 Aug 05	06 Aug 05	Palomar Mountain Observatory Campground—Palomar Mountain, CA	0	40	0
06 Aug 05	06 Aug 05	Tamke-Allan Observatory—Oak Ridge, TN	0	60	1000
06 Aug 05	06 Aug 05	WKGB-TV, Channel 53/Bowling Green—Lexington, KY	0	40	0
06 Aug 05	06 Aug 05	WKMJ-TV, Channel 68/Louisville—Lexington, KY	0	25	0
06 Aug 05	06 Aug 05	WOUB-TV, Channel 20/Athens—Athens, OH	0	50	0
07 Aug 05	07 Aug 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	500000	100
07 Aug 05	08 Aug 05	Baldwin School of Cambridge—Cambridge, MA	0	100000	0
08 Aug 05	08 Aug 05	Kansas Cosmosphere and Space Center—Hutchinson, KS	0	65	0
08 Aug 05	08 Aug 05	National Teacher Training Institute—Harrisonburg, VA	0	17	0
08 Aug 05	08 Aug 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	1000000	100000
08 Aug 05	08 Aug 05	WVLY Radio, AM 1370/Wheeling—Wheeling, WV	0	20000	0
08 Aug 05	31 Aug 05	Calusa Nature Center and Planetarium—Fort Myers, FL	0	225	0
09 Aug 05	09 Aug 05	Hilo Hawaiian Hotel—Hilo, HI	0	30	0
09 Aug 05	09 Aug 05	KLTL-TV, Channel 18/Lake Charles—Baton Rouge, LA	0	70	0
09 Aug 05	09 Aug 05	WKON-TV, Channel 52/Owenton—Lexington, KY	0	14000	0
09 Aug 05	09 Aug 05	WTOP Radio, 103.5 FM/Washington—Washington, DC	0	1000000	100000
10 Aug 05	10 Aug 05	Brownsville Public Library—Brownsville, TX	0	52	0

10 Aug 05	10 Aug 05	Bryce Canyon National Park—Bryce Canyon, UT	0	125	0
10 Aug 05	10 Aug 05	Kent Memorial Library—Suffield, CT	0	46	0
10 Aug 05	10 Aug 05	KWET-TV, Channel 12/Cheyenne— Oklahoma City, OK	0	5000	1
10 Aug 05	10 Aug 05	Lakeland Community College—Kurtland, OH	0	300	0
10 Aug 05	10 Aug 05	New Mexicans for Science and Reason— Albuquerque, NM	0	40	0
10 Aug 05	10 Aug 05	WKHA-TV, Channel 35/Hazard—Lexington, KY	0	112	0
10 Aug 05	14 Aug 05	Napa Town & Country Fair—Napa, CA	0	1662	0
11 Aug 05	11 Aug 05	4-H, Alameda County—Alameda, CA	0	40	0
11 Aug 05	11 Aug 05	Adelphia Cable-Crossroads Community Forum— Buffalo, NY	0	8000	0
11 Aug 05	11 Aug 05	Camp Tuscarora Scout Reservation—Windsor, NY	0	16	0
11 Aug 05	11 Aug 05	Chattahoochee Technical College—Marietta, GA	0	320	0
11 Aug 05	11 Aug 05	Discovery Museum—Eureka, CA	0	10008	0
11 Aug 05	11 Aug 05	KQOL Radio, 93.1 FM/Las Vegas—Las Vegas, NV	0	20000	0
11 Aug 05	11 Aug 05	Texas Women's University—Denton, TX	0	75	0
11 Aug 05	11 Aug 05	WCPN Radio, 90.3 FM/Cleveland—Cleveland, OH	0	45000	0
11 Aug 05	11 Aug 05	WPBT-TV, Channel 2/Miami—Miami, FL	0	100000	100000
12 Aug 05	12 Aug 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
12 Aug 05	12 Aug 05	Copper Breaks State Park—Quanah, TX	0	30	0
12 Aug 05	12 Aug 05	KOED-TV, Channel 11/Tulsa—Oklahoma City, OK	0	60	0
12 Aug 05	12 Aug 05	Rice Lake State Park—Owatonna, MN	0	40	0
12 Aug 05	12 Aug 05	Rotary Breakfast Meeting—Bloomington, MN	0	25	0
12 Aug 05	12 Aug 05	University of North Carolina at Pembroke— Pembroke, NC	0	21	0
12 Aug 05	13 Aug 05	Cincinnati Observatory Center—Cincinnati, OH	0	300	0
13 Aug 05	13 Aug 05	San Diego State University—San Diego, CA	0	22	0
13 Aug 05	13 Aug 05	San Diego State University—San Diego, CA	0	50	0
13 Aug 05	13 Aug 05	Sky Meadows State Park—Delaplane/Paris, VA	0	136	0
13 Aug 05	13 Aug 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	100000
13 Aug 05	14 Aug 05	Boardman Park—Boardman, OH	0	200	0
14 Aug 05	14 Aug 05	Crowne Plaza—Woburn, MA	0	31	0
15 Aug 05	15 Aug 05	Glendale Public Library—Glendale, AZ	0	58	0
15 Aug 05	15 Aug 05	Napa TV Channel 28—Napa, CA	0	14000	0
15 Aug 05	15 Aug 05	Truffles Restaurant—Hilton Head Island, SC	0	25	0
15 Aug 05	19 Aug 05	Chabot Space and Science Center—Oakland, CA	0	10	0
16 Aug 05	16 Aug 05	Fullerton Kiwanis Club—Fullerton, CA	0	27	0
17 Aug 05	17 Aug 05	Clark County School District—Las Vegas, NV	0	84	0
17 Aug 05	17 Aug 05	Crescenta Valley United Methodist Pre-School— Montrose, CA	0	20	0
17 Aug 05	17 Aug 05	Discovery Center of Idaho—Boise, ID	0	6	0
17 Aug 05	17 Aug 05	Five Rivers Library—Parsons, WV	0	58	0
17 Aug 05	17 Aug 05	Kiwanis Club—Corning, AR	0	13	0
17 Aug 05	17 Aug 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
17 Aug 05	17 Aug 05	Mission Trails Regional Park—San Diego, CA	0	70	0
17 Aug 05	19 Aug 05	Navajo Refining Company—Artesia, NM	0	12	0
18 Aug 05	18 Aug 05	Chemeketa Community College—Salem, OR	0	20	0
18 Aug 05	18 Aug 05	Macey's Little Theatre—West Jordan, UT	0	35	0
19 Aug 05	19 Aug 05	Community Observatory Program—Girard, KS	0	20	0
19 Aug 05	19 Aug 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
20 Aug 05	20 Aug 05	ArmadilloCon 27—Austin, TX	0	30	0
20 Aug 05	20 Aug 05	Augusta White Eagle Festival—Augusta, KS	0	450	0
20 Aug 05	20 Aug 05	California State University, Los Angeles— Los Angeles, CA	0	27	0
20 Aug 05	20 Aug 05	Exploration Science Center and Children's Museum of Albuquerque—Albuquerque, NM	0	40	0
20 Aug 05	20 Aug 05	La Sierra University—Riverside, CA	0	50	0
20 Aug 05	20 Aug 05	Mary Ann Mongan Library—Covington, KY	0	35	0
20 Aug 05	20 Aug 05	Schuele Planetarium—Bay Village, OH	0	91100	0
20 Aug 05	20 Aug 05	Serene Terrace Mobile Home Park—Lynnwood, WA	0	22	0
20 Aug 05	20 Aug 05	St. Mark's School of Texas—Dallas, TX	0	125	0
20 Aug 05	20 Aug 05	Tamke-Allan Observatory—Oak Ridge, TN	0	55	1200
21 Aug 05	21 Aug 05	Glendale Community College—Glendale, CA	0	12	0
21 Aug 05	21 Aug 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
22 Aug 05	22 Aug 05	Albion College—Albion, MI	0	38	0
22 Aug 05	22 Aug 05	Garland Amateur Radio Club—Garland, TX	0	35	0

22 Aug 05	26 Aug 05	Science Museum of Minnesota—St. Paul, MN	0	60	0
23 Aug 05	23 Aug 05	Cattaraugus County Loving Education at Home (LEAH)—Salamanca, NY	0	31	0
24 Aug 05	24 Aug 05	Bear Canyon Elementary School—Highlands Ranch, CO	0	80	0
24 Aug 05	24 Aug 05	Faulkner Ridge Center—Columbia, MD	0	60	0
24 Aug 05	24 Aug 05	Harding University—Searcy, AR	0	2000	0
24 Aug 05	24 Aug 05	Union Grove Elementary School—Locust Grove, GA	0	150	0
24 Aug 05	24 Aug 05	WCET-TV, Channel 48/Cincinnati—Cincinnati, OH	0	40	0
25 Aug 05	25 Aug 05	Novins Planetarium—Toms River, NJ	0	65	0
25 Aug 05	25 Aug 05	Tucker Valley Elementary/Middle School—Hambleton, WV	0	35	0
25 Aug 05	25 Aug 05	Washington State University-Vancouver—Vancouver, WA	0	60	0
26 Aug 05	26 Aug 05	“The Union-Recorder”—Milledgeville, GA	0	8500	0
26 Aug 05	26 Aug 05	Museum of Flight—Seattle, WA	0	20	0
26 Aug 05	26 Aug 05	Paso Robles Library—Paso Robles, CA	0	40	0
26 Aug 05	27 Aug 05	WKPI-TV, Channel 22/Pikeville—Lexington, KY	0	550	0
26 Aug 05	28 Aug 05	Northrop Grumman—Rochester, NY	0	3000	0
27 Aug 05	27 Aug 05	Arizona State University—Tempe, AZ	0	2000	0
27 Aug 05	27 Aug 05	Lake Whitney State Park—Whitney, TX	0	170	0
27 Aug 05	27 Aug 05	Museum of Flight—Seattle, WA	0	10	0
27 Aug 05	27 Aug 05	University of Arizona—Tucson, AZ	0	900850	1000
28 Aug 05	28 Aug 05	Camp Timberwolf, Lower Bucks Lake—Quincy, CA	0	22	0
30 Aug 05	30 Aug 05	Willow Park Restaurant—Castro Valley, CA	0	41	0
01 Sep 05	01 Sep 05	“Mahoning Valley Parent Magazine”—Youngstown, OH	0	55000	0
01 Sep 05	01 Sep 05	“Sunbury Home Educators Newsletter”—Sunbury, OH	0	109	0
01 Sep 05	01 Sep 05	Avenida Victoria—San Clemente, CA	0	17	0
01 Sep 05	01 Sep 05	Babb Middle School—Forest Park, GA	0	215	0
01 Sep 05	01 Sep 05	Camp Carson—Princeton, IN	0	110	0
01 Sep 05	01 Sep 05	Elmwood Jail for Women—Milpitas, CA	0	18	0
01 Sep 05	01 Sep 05	Museum of Science and Industry—Tampa, FL	0	6	0
01 Sep 05	30 Sep 05	Hyatt Regency Maui—Lahaina, HI	0	600	0
01 Sep 05	30 Sep 05	Noble Planetarium—Fort Worth, TX	0	3000	0
02 Sep 05	02 Sep 05	Simpson Observatory—Titusville, NJ	0	60	0
02 Sep 05	03 Sep 05	WKSO-TV, Channel 29/Somerset—Lexington, KY	0	500	0
02 Sep 05	05 Sep 05	Hyatt Regency—Atlanta, GA	0	1500	0
03 Sep 05	03 Sep 05	Archbold Biological Station—Lake Placid, FL	0	25	0
03 Sep 05	03 Sep 05	Battle Ground Lake State Park—Battle Ground, WA	0	20	0
03 Sep 05	03 Sep 05	Bruneau Dunes Observatory—Mountain Home, ID	0	401	0
03 Sep 05	03 Sep 05	Cincinnati Observatory Center—Cincinnati, OH	0	150	0
03 Sep 05	03 Sep 05	Grant Ranch County Park—San Jose, CA	0	75	0
03 Sep 05	03 Sep 05	Irving Public Library—Irving, TX	0	75	0
03 Sep 05	03 Sep 05	LeConte Memorial Lodge—Yosemite, CA	0	37	0
03 Sep 05	03 Sep 05	Rice Lake State Park—Owatonna, MN	0	20	0
03 Sep 05	03 Sep 05	Tamke-Allan Observatory—Oak Ridge, TN	0	65	1200
03 Sep 05	04 Sep 05	Nickerson Park—Orleans, MA	0	34	0
04 Sep 05	04 Sep 05	“Cleveland Daily Banner”—Cleveland, TN	0	3900	0
04 Sep 05	04 Sep 05	Community College of Southern Nevada—North Las Vegas, NV	0	30	0
04 Sep 05	04 Sep 05	New York State Fair—Syracuse, NY	0	25	0
05 Sep 05	05 Sep 05	Thomas Conway Observatory—Lowell, IN	0	150	0
06 Sep 05	06 Sep 05	Bryce Canyon National Park—Bryce Canyon, UT	0	120	0
06 Sep 05	06 Sep 05	Copper Basin Elementary School—Queen Creek, AZ	0	75	0
06 Sep 05	06 Sep 05	Lockheed Martin—Palmdale, CA	0	23	0
06 Sep 05	06 Sep 05	Mount Tamalpais School—Mill Valley, CA	0	250	0
06 Sep 05	06 Sep 05	Mount Tamalpais School—Mill Valley, CA	0	500	0
06 Sep 05	06 Sep 05	Shaker Heights Middle School—Shaker Heights, OH	0	30	0
06 Sep 05	06 Sep 05	University of Colorado, Boulder—Boulder, CO	0	60	0
07 Sep 05	15 May 05	Mesa Union Elementary School—Somis, CA	0	600	0
07 Sep 05	07 Sep 05	Georgia College & State University—Milledgeville, GA	0	15	0
07 Sep 05	07 Sep 05	Hillsdale College—Hillsdale, MI	0	75	0
07 Sep 05	07 Sep 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0

07 Sep 05	07 Sep 05	Ludlowe High School—Fairfield, CT	0	24	0
07 Sep 05	07 Sep 05	North Medford High School—Medford, OR	0	72	0
07 Sep 05	07 Sep 05	Tennessee Performing Arts Center—Nashville, TN	0	50	0
08 Sep 05	08 Sep 05	Carol Stream Public Library—Carol Stream, IL	0	10	0
08 Sep 05	08 Sep 05	Edwin Warner Park Nature Center—Nashville, TN	0	100	0
08 Sep 05	08 Sep 05	Kalamazoo Valley Museum—Kalamazoo, MI	0	9	0
08 Sep 05	08 Sep 05	Kilauea Lodge, Rotary Club—Volcano, HI	0	25	0
08 Sep 05	08 Sep 05	University of Hawaii at Hilo—Hilo, HI	0	12	0
08 Sep 05	08 Sep 05	Warner Park Visitor Center—Nashville, TN	0	45	0
09 Sep 05	09 Sep 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
09 Sep 05	09 Sep 05	Anna Maria College—Paxton, MA	0	6	0
09 Sep 05	09 Sep 05	Kansas State University—Salina, KS	0	115	0
09 Sep 05	09 Sep 05	Kopernik Space Education Center—Vestal, NY	0	35	0
09 Sep 05	09 Sep 05	University of Hawaii at Hilo—Hilo, HI	0	100	0
09 Sep 05	09 Sep 05	Washington Crossing State Park Interpretive Center—Titusville, NJ	0	25	0
09 Sep 05	10 Sep 05	Kensington Metropark—Brighton, MI	0	2500	0
09 Sep 05	11 Sep 05	Bruneau Dunes Observatory—Mountain Home, ID	0	212	0
09 Sep 05	30 Sep 05	Robeson Planetarium and Science Center—Lumberton, NC	0	2000	0
10 Sep 05	10 Sep 05	Blakemore Planetarium—Midland, TX	0	400	0
10 Sep 05	10 Sep 05	Brooke Hills Park—Wellsburg, WV	0	250	0
10 Sep 05	10 Sep 05	Indian River Community College Planetarium—Fort Pierce, FL	0	150	0
10 Sep 05	10 Sep 05	KUAT-TV, Channel 6/Tucson—Tucson, AZ	0	42	0
10 Sep 05	10 Sep 05	Pacific Science Center—Seattle, WA	0	25	0
10 Sep 05	10 Sep 05	Palomar Mountain Observatory Campground—Palomar Mountain, CA	0	25	0
10 Sep 05	10 Sep 05	Tuttle Creek Lake—Manhattan, KS	0	70	0
10 Sep 05	11 Sep 05	Garfield Elementary School—Livonia, MI	0	12	0
11 Sep 05	11 Sep 05	KSER Radio, 90.7 FM/Everett—Everett, WA	0	14000	0
11 Sep 05	11 Sep 05	Mount Tamalpais School—Mill Valley, CA	0	20	0
11 Sep 05	13 Sep 05	CopperCon 25—Phoenix, AZ	0	2059	1
12 Sep 05	12 Sep 05	Blakemore Planetarium—Midland, TX	0	50	0
12 Sep 05	12 Sep 05	Calumet Astronomical Society—Hammond, IN	0	35	0
12 Sep 05	12 Sep 05	LaBarge, Inc.—Berryville, AR	0	18	0
12 Sep 05	14 Sep 05	Chinle High School—Chinle, AZ	0	200	0
13 Sep 05	13 Sep 05	Highland Park Country Club—Highland Park, IL	0	125	0
13 Sep 05	13 Sep 05	Kooshare Elementary School—Kooshare, UT	0	20	0
13 Sep 05	13 Sep 05	Ludlowe High School—Fairfield, CT	0	300	0
13 Sep 05	13 Sep 05	Princeton University—Princeton, NJ	0	50	0
14 Sep 05	14 Sep 05	Albion College—Albion, MI	0	34	0
14 Sep 05	14 Sep 05	College of the Sequoias—Visalia, CA	0	18	0
14 Sep 05	14 Sep 05	Mayer Elementary School—Mayer, AZ	0	48	0
15 Sep 05	15 Sep 05	Bunnell High School—Stratford, CT	0	80	0
15 Sep 05	15 Sep 05	Chillicothe High School—Chillicothe, MO	0	350	0
15 Sep 05	15 Sep 05	Georgia Southern University—Statesboro, GA	0	120	0
15 Sep 05	15 Sep 05	Kalamazoo Valley Museum—Kalamazoo, MI	0	8	0
15 Sep 05	15 Sep 05	Sandy Miller Elementary School—Las Vegas, NV	0	10	0
15 Sep 05	15 Sep 05	WNEO-TV, Channel 45/Alliance—Kent, OH	0	13	0
16 Sep 05	16 Sep 05	Anna Maria College—Paxton, MA	0	5	0
16 Sep 05	16 Sep 05	Central Michigan University—Mount Pleasant, MI	0	25	0
16 Sep 05	16 Sep 05	Holiday Inn Select Hotel-Downtown—Madison, AL	0	38250	0
16 Sep 05	16 Sep 05	Kopernik Space Education Center—Vestal, NY	0	20	0
16 Sep 05	16 Sep 05	Magnolia High School—Anaheim, CA	0	120	0
16 Sep 05	16 Sep 05	Spurlock Park—North Richland Hills, TX	0	70	0
16 Sep 05	16 Sep 05	U.S. Space and Rocket Center—Huntsville, AL	0	20060	0
16 Sep 05	23 Sep 05	Albion College—Albion, MI	0	32	0
16 Sep 05	24 Sep 05	Georgia Southern University—Statesboro, GA	0	1527	0
17 Sep 05	17 Sep 05	Camp McKinley Boy Scout Camp—Lisbon, OH	0	100	0
17 Sep 05	17 Sep 05	Clark County School District—Las Vegas, NV	0	86	0
17 Sep 05	17 Sep 05	Evansville Museum of Arts, History and Science—Evansville, IN	0	56	0
17 Sep 05	17 Sep 05	Faribault Country Club—Faribault, MN	0	40	0
17 Sep 05	17 Sep 05	Johnsburg Public Library—McHenry, IL	0	5	0
17 Sep 05	17 Sep 05	Museum of Flight—Seattle, WA	0	14	0
17 Sep 05	17 Sep 05	Space Endeavour Center—Vandenberg Air Force Base, CA	0	26	0

17 Sep 05	17 Sep 05	Winton Woods—Cincinnati, OH	0	50	0
18 Sep 05	18 Sep 05	Mount Tamalpais School—Mill Valley, CA	0	40	0
18 Sep 05	19 Sep 05	National Radio Astronomy Observatory— Charlottesville, VA	0	7	1
19 Sep 05	19 Sep 05	WTOP Radio, 103.5 FM/Washington— Washington, DC	0	500000	0
20 Sep 05	20 Sep 05	Environmental Studies Center—Mobile, AL	0	75	0
20 Sep 05	20 Sep 05	Magnolia High School—Anaheim, CA	0	135	0
20 Sep 05	20 Sep 05	Southdale Public Library—Edina, MN	0	20	0
21 Sep 05	21 Mar 05	Mount Logan Middle School—Logan, UT	0	300	0
21 Sep 05	21 Sep 05	Mount Tamalpais School—Mill Valley, CA	0	40	0
21 Sep 05	30 Sep 05	William Brish Planetarium—Hagerstown, MD	0	550	0
22 Sep 05	22 Sep 05	Central Michigan University—Mount Pleasant, MI	0	55	0
22 Sep 05	22 Sep 05	University of Hawaii Institute for Astronomy—Hilo, HI	0	100	0
22 Sep 05	23 Sep 05	Texas Space Grant Consortium—Austin, TX	0	30	0
23 Sep 05	23 Sep 05	"The Union-Recorder"—Milledgeville, GA	0	8500	0
23 Sep 05	23 Sep 05	Girl Scout Troop 44—Napa, CA	0	14	0
23 Sep 05	23 Sep 05	Hazel Dell Elementary School—Springfield, IL	0	100	0
23 Sep 05	23 Sep 05	Kopernik Space Education Center—Vestal, NY	0	15	0
23 Sep 05	23 Sep 05	Maui Community College— Kaahumanu-Kahului, HI	0	100	0
23 Sep 05	23 Sep 05	Saint Mary's School—Raleigh, NC	0	75	0
23 Sep 05	24 Sep 05	Opry Mills Regal IMAX Theater—Nashville, TN	0	15600	0
24 Sep 05	24 Sep 05	Cattfish Observatory—Tierra Del Sol, CA	0	200	0
24 Sep 05	24 Sep 05	Cincinnati Observatory Center—Cincinnati, OH	0	400	0
24 Sep 05	24 Sep 05	Johnsburg Public Library—McHenry, IL	0	12	0
24 Sep 05	24 Sep 05	National Academy of Sciences—Irvine, CA	0	68	0
24 Sep 05	24 Sep 05	National Academy of Sciences—Irvine, CA	0	100	0
24 Sep 05	24 Sep 05	Pacific Science Center—Seattle, WA	0	6	0
24 Sep 05	24 Sep 05	Prince Kuhio Mall—Hilo, HI	0	2000	0
24 Sep 05	24 Sep 05	Sky Meadows State Park—Delaplane/Paris, VA	0	15	0
24 Sep 05	24 Sep 05	St. Cloud State University—St. Cloud, MN	0	275	0
24 Sep 05	24 Sep 05	University of Michigan—Ann Arbor, MI	0	1200	0
27 Sep 05	27 Sep 05	Discovery Science Center—Santa Ana, CA	0	100	0
27 Sep 05	27 Sep 05	Magnolia High School—Anaheim, CA	0	120	0
27 Sep 05	27 Sep 05	Pacific High School—Orange, CA	0	40	0
27 Sep 05	28 Sep 05	Greenbrier Middle School—Chesapeake, VA	0	180	0
28 Sep 05	28 Sep 05	Hubbard High School—Chicago, IL	0	25	0
28 Sep 05	28 Sep 05	Jose A. Gaztambide Elementary School— Sabana Grande, Puerto Rico	0	156	0
28 Sep 05	28 Sep 05	Nixon High School—Laredo, TX	0	90	0
28 Sep 05	28 Sep 05	Spring Creek Middle School—Providence, UT	0	320	0
29 Sep 05	29 Sep 05	Adelphia Cable-Crossroads Community Forum— Buffalo, NY	0	8000	0
29 Sep 05	29 Sep 05	Association of Retired Federal Employees— Raleigh, NC	0	150	0
29 Sep 05	29 Sep 05	Jose A. Gaztambide Elementary School— Sabana Grande, Puerto Rico	0	142	0
29 Sep 05	29 Sep 05	WOSU-TV, Channel 34/Columbus—Columbus, OH	0	100	0
30 Sep 05	30 Sep 05	Bryce Canyon National Park—Bryce Canyon, UT	0	50	0
30 Sep 05	30 Sep 05	Condit Exhibits—Denver, CO	0	20	0
30 Sep 05	30 Sep 05	Jose A. Gaztambide Elementary School— Sabana Grande, Puerto Rico	0	158	0
30 Sep 05	30 Sep 05	Kopernik Space Education Center—Vestal, NY	0	25	0
30 Sep 05	30 Sep 05	Richland Astronomical Society—Mansfield, OH	0	250	0
30 Sep 05	30 Sep 05	Rockwell Elementary School—Rockwell, NC	0	580	0
30 Sep 05	30 Sep 05	Shafer Planetarium—Indianapolis, IN	0	60	0

OUTREACH

A386. MIT Center for Space Research: Tours

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: Scientists and engineers introduced the Chandra mission to several groups of students and their teachers through tours of the Chandra Operation and Control Center (OCC) and the High Energy Transmission Gratings (HETG) Test/Alignment Facility. Each tour started with a presentation of Chandra and simple hands-on activities to explain the importance of multiwavelength astronomy and introduce basic concepts of spectroscopy. During

the tour, the students were shown where scientists and engineers direct the flight and execute the observing plan of Chandra and receive the scientific data from the observatory. This program is coordinated with personnel from the Chandra X-ray Observatory OCC.

Lead: Dr. Irene Porro, Massachusetts Institute of Technology, Cambridge, MA 02139. E-mail: iporro@space.mit.edu. Phone: 617-258-7481.

Primary URL: <http://space.mit.edu/EPO/TourGuide.html>

Scientist(s):	Dr. Claude Canizares	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Irene Porro	Massachusetts Institute of Technology	Cambridge, MA
	Mr. Bruce Roberts	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Oct 04	25 Feb 05	Massachusetts Institute of Technology— Cambridge, MA	2	0	0
27 Oct 04	27 Oct 04	Massachusetts Institute of Technology— Cambridge, MA	0	50	0
13 Jan 05	13 Jan 05	Chandra X-ray Center—Cambridge, MA	12	0	0
28 Jan 05	28 Jan 05	Chandra X-ray Center—Cambridge, MA	18	0	0
03 Feb 05	03 Feb 05	Chandra X-ray Center—Cambridge, MA	10	0	0
06 Apr 05	06 Apr 05	Weston Jesuit School of Theology— Cambridge, MA	16	0	0
22 Apr 05	22 Apr 05	Massachusetts Institute of Technology— Cambridge, MA	32	0	0

Public Presentations

A387. A Space Science Outreach Program Directed Toward Underrepresented Groups

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: MI Initiative[B27]

Description: The goal of the program is to increase awareness and knowledge of science among minorities and other underrepresented groups, including both the pre-K–12 population and the general public, in both the greater Houston and Brownsville areas. Texas Southern University, a historically Black institution; University of Houston-Downtown, a Hispanic-serving institution; the Houston Museum of Natural Science, an urban-area museum; Rice University, an urban-area private university; Raul Yzaguirre School for Success, a Hispanic-serving charter school; and the University of Texas at Brownsville, a Hispanic-serving institution in south Texas, have joined together to promote the following programs: (a) teacher workshops; (b) programs for high school students to explore college opportunities and to investigate science and space science careers; (c) mentoring programs for both high school and college students; (d) Space Science Student Ambassadors, a program to train high school and college students to interact with their peers and promote space science through demonstrations and interactive activities; (e) space science-related courses for college students; and (f) faculty/student research programs in space science. We offered over 15 multiweek space science enrichment programs for K–12 institutions and community centers; portable planetarium shows were incorporated into teacher training programs; and 1-day school and public-venue events were added. We have also expanded the number of teacher workshops that we offer. Our greatest opportunities have been provided by urban-area charter schools whose role is to increase the number of minority groups graduating high school and promote their continuing education at the college and university level.

Lead: Dr. Penny Morris, University of Houston-Downtown, Houston, TX 77002.
E-mail: smithp@uhd.edu

pmorris@ems.jsc.nasa.gov. Phone: 713-221-8178.

Contact: Dr. Penny Morris, University of Houston-Downtown, Houston, TX 77002.
E-mail: smithp@uhd.edu

pmorris@ems.jsc.nasa.gov. Phone: 713-221-8178.

Scientist(s):	Dr. Carlton Allen	University of Arizona	Tucson, AZ
	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Dr. James Driy	University of Houston-Downtown	Houston, TX
	Dr. Jeffery Fiosi	University of Houston-Downtown	Houston, TX
	Ms. Sangeeta Gad	University of Houston-Downtown	Houston, TX
	Mr. Charles Galindo	NASA Johnson Space Center	Houston, TX
	Ms. Angela Garcia	University of Houston-Downtown	Houston, TX
	Mr. Javier Garcia	University of Texas at Brownsville	Brownsville, TX
	Ms. Olivia Garza	Raul Yzaguirre School for Success	Houston, TX
	Dr. Alberto Gomez-Rivas	University of Houston-Downtown	Houston, TX
	Ms. Lisa Leija	University of Houston-Downtown	Houston, TX
	Ms. Carol Lutsinger	Brownsville Independent School District	Brownsville, TX
	Dr. Glen Merrill	University of Houston-Downtown	Houston, TX
	Dr. Penny Morris-Smith	University of Houston-Downtown	Houston, TX
	Ms. Andrea Mosie	NASA Johnson Space Center	Houston, TX
	Mr. Dean Muirhead	Lockheed Martin Corporation	Houston, TX
	Dr. Victor Obot	Texas Southern University	Houston, TX

Partner(s):	Dr. Patricia Reiff	Rice University	Houston, TX
	Dr. Carolyn Sumners	Houston Museum of Natural Science	Houston, TX
	Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
	Mr. James Wooten	Houston Museum of Natural Science	Houston, TX
	Dr. Michael Zolensky	NASA Johnson Space Center	Houston, TX
	Houston Museum of Natural Science		Houston, TX
	Lunar and Planetary Institute		Houston, TX
	NASA Johnson Space Center		Houston, TX
	Passport to Knowledge (P2K)		Morristown, NJ
	Raul Yzaguirre School for Success		Houston, TX
	Rice University		Houston, TX
	Texas Southern University		Houston, TX
	University of Texas at Brownsville		Brownsville, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
15 Oct 04	15 Oct 04	Madison High School—Houston, TX	142	0	0
04 Nov 04	06 Nov 04	Conference for the Advancement of Science Teaching (CAST)—Corpus Christi, TX	0	341	0
11 Nov 04	11 Nov 04	Mainland Preparatory Academy—La Marque, TX	133	0	0
11 Nov 04	11 Nov 04	Mainland Preparatory Academy—La Marque, TX	216	0	0
30 Nov 04	30 Nov 04	Raul Yzaguirre School for Success—Houston, TX	110	0	0
30 Nov 04	30 Nov 04	Raul Yzaguirre School for Success—Houston, TX	176	0	0
09 Dec 04	09 Dec 04	University of Houston-Downtown—Houston, TX	10	0	0
27 Dec 04	27 Dec 04	Space Center Houston—Houston, TX	20	0	0
28 Dec 04	28 Dec 04	Houston Museum of Natural Science—Houston, TX	22	0	0
14 Jan 05	15 Jan 05	University of Texas at Brownsville—Brownsville, TX	325	0	0
15 Jan 05	15 Jan 05	University of Texas at Brownsville—Brownsville, TX	501	0	0
04 Feb 05	04 Feb 05	University of Houston-Downtown—Houston, TX	100	0	0
04 Mar 05	04 Mar 05	El Hogar de Ni-os—Houston, TX	12	0	0
05 Mar 05	05 Mar 05	University of Houston-Downtown—Houston, TX	9	0	0
06 Mar 05	06 Mar 05	Houston Museum of Natural Science—Houston, TX	0	500	0
17 Mar 05	17 Mar 05	Francis Scott Key Middle School—Houston, TX	80	0	0
20 Mar 05	20 Mar 05	Houston Museum of Natural Science—Houston, TX	0	1003	0
30 Mar 05	30 Mar 05	Houston Museum of Natural Science—Houston, TX	0	300	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	275	0
06 Apr 05	08 Apr 05	Port of Houston Elementary School—Houston, TX	206	0	0
09 Apr 05	09 Apr 05	Houston Museum of Natural Science—Houston, TX	202	0	0
16 Apr 05	16 Apr 05	Redd School—Houston, TX	167	0	0
05 May 05	05 May 05	Housman Elementary School—Houston, TX	138	0	0
25 May 05	25 May 05	University of Houston-Downtown—Houston, TX	7	0	0
31 May 05	03 Jun 05	NASA Johnson Space Center—Houston, TX	15	0	0
31 May 05	14 Jul 05	University of Houston-Downtown—Houston, TX	231	0	0
04 Jun 05	04 Jun 05	University of Houston-Downtown—Houston, TX	9	0	0
06 Jun 05	09 Jun 05	El Hogar de Ni-os—Houston, TX	11	0	0
06 Jun 05	10 Jun 05	Harbach Ripley Neighborhood Center—Houston, TX	70	0	0
13 Jun 05	17 Jun 05	Pilgrim Community Center—Houston, TX	39	0	0
14 Jun 05	01 Jul 05	YES Southeast—Houston, TX	34	0	0
20 Jun 05	08 Jul 05	Mainland Preparatory Academy—La Marque, TX	37	0	0
11 Jul 05	28 Jul 05	League of United Latin American Citizens (LULAC) Educational Service Centers, Inc.—Houston, TX	16	0	0
11 Jul 05	29 Jul 05	Cleveland-Ripley Neighborhood Center—Pasadena, TX	44	0	0
13 Jul 05	13 Jul 05	University of Houston-Downtown—Houston, TX	98	0	0
13 Jul 05	13 Jul 05	University of Houston-Downtown—Houston, TX		120	0
13 Jul 05	13 Jul 05	University of Houston-Downtown—Houston, TX	125	0	0
18 Jul 05	28 Jul 05	Ripley Neighborhood Center—Houston, TX	121	0	0
18 Jul 05	04 Aug 05	Nene's Kiddie Kollege—Houston, TX	25	0	0
20 Jul 05	20 Jul 05	Families Under Urban & Social Attack, Inc.—Houston, TX	36	0	0

25 Jul 05	29 Jul 05	University of Texas at Brownsville— Brownsville, TX	30	0	0
30 Jul 05	30 Jul 05	Families Under Urban & Social Attack, Inc.— Houston, TX	0	87	0
30 Jul 05	30 Jul 05	Families Under Urban & Social Attack, Inc.— Houston, TX	129	0	0
05 Aug 05	05 Aug 05	Harris County Precinct 1 Street Olympics— Houston, TX	0	260	0

A388. “A Swift View of the Universe” Presentation

Theme(s): Astrophysics

Msn/Prgm: GLAST[B47], Swift[B57]

Description: The talk “A Swift View of the Universe” features the first results of the mission, the initial results from the followup observations, and the hardware. Also discussed were opportunities for amateurs to get involved with Swift. It is usually given by someone from the Sonoma State University E/PO group.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu. Phone: 707-664-2655.Primary URL: http://swift.sonoma.edu/resources/swift/education_pres.html

Secondary

URL: <http://swift.gsfc.nasa.gov>Scientist(s): Dr. Lynn Cominsky Sonoma State University
Dr. Philip Plait Sonoma State UniversityRohnert Park, CA
Rohnert Park, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
23 Feb 05	23 Feb 05	University of San Francisco—San Francisco, CA	0	50	0
21 Mar 05	23 Mar 05	3rd High-Energy Astrophysics Workshop for Amateur Astronomers—Las Cruces, NM	92	0	0
15 Jun 05	15 Jun 05	Randall Museum—San Francisco, CA	0	50	0
05 Jul 05	05 Jul 05	Santa Rosa Kiwanis—Santa Rosa, CA	0	20	0
27 Jul 05	27 Jul 05	Sonoma State University—Rohnert Park, CA	120	0	0

A389. ACE Public Lectures

Theme(s): Heliophysics

Msn/Prgm: ACE[B73]

Description: Throughout the year, Advanced Composition Explorer (ACE) scientists present public lectures on various topics in science and technology associated with the ACE mission. These public lectures are aimed at multiple audiences: science center attendees, retired individuals, and the general public.

Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.Primary URL: <http://www.srl.caltech.edu/ACE/>

Scientist(s): Dr. Eberhard Moebius University of New Hampshire

Durham, NH

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
09 Aug 05	09 Aug 05	Christa McAuliffe Planetarium—Concord, NH	0	25	0
15 Aug 05	15 Aug 05	Exeter Public Library—Exeter, NH	0	35	0

A390. Answering Web Questions for Solar Week

Theme(s): Heliophysics

Msn/Prgm: ACE[B73], RHESSI[B76], TRACE[B80], SOHO[B84]

Description: For a week, teachers led students through school-related activities via the Solar Week Web site. During the week, questions were posted to an online bulletin board for scientists to answer. In general, the questions were pretty interesting and ranged from “What is a black hole?” to “What do you like about your job?”

Lead: Dr. David Alexander, Rice University, Houston, TX 77251-1892. E-mail: dalex@rice.edu.Primary URL: <http://www.solarweek.org>

Scientist(s): Dr. Christina Cohen California Institute of Technology (Caltech)

Pasadena, CA
Palo Alto, CA

Partner(s): Lockheed Martin Advanced Technology Center

A391. Aqua: Presentations by the Aqua Project Scientist

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: Presentations were given by the Aqua Project Scientist, Claire L. Parkinson, to a variety of general public, teacher, and student audiences to inform them about the Aqua mission and to educate them about Earth sciences and NASA's role in advancing Earth sciences. During FY05, Parkinson gave talks about Aqua to the following groups: White House Fellows visiting NASA GSFC (45 minutes); an environmental studies class from Gettysburg College, Gettysburg, PA (1.5 hours); faculty and students in the Department of Geography Colloquium Series, Ohio State University, Columbus, OH (1.5 hours); a science class from Strawbridge School, Baltimore, MD (1 hour); a fifth-grade class from Calvary Baptist Church Academy, Glen Burnie, MD (1 hour); the GSFC Region's Network of Educator Astronaut Teachers (NEAT) (1 hour); a group from the American Society for

Photogrammetry and Remote Sensing (ASPRS) visiting GSFC (40 minutes); a women in science class from the Greencastle-Antrim High School, Greencastle, PA (1 hour); Brownie Troop 5831 from Takoma Park, MD (1.25 hours) the NASA Explorer School Teacher Satellite Workshop at GSFC (1.75 hours); and sixth-and seventh-graders from Shabach Christian Academy, Landover, MD (1 hour).

Lead: Dr. Claire Parkinson, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: claire.l.parkinson@nasa.gov. Phone: 301-614-5715.

Primary URL: <http://aqua.nasa.gov>

A392. Cassini: Public Talks

Theme(s): Planetary

Msn/Prgm: Cassini-Huygens Probe[B94]

Description: The Cassini mission maintains a pool of trained public speakers who can give presentations about the science and engineering of the mission to school and community groups. Speakers give talks; demonstrate science classroom activities; show videos; and support exhibits, science fairs, career fairs, and an array of other activities. All Cassini speakers are members of the Cassini flight team, either at NASA's Jet Propulsion Laboratory (JPL) or at one of the mission's distributed operation sites across the country.

Lead: Ms. Shannon McConnell, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: shannon.mcconnell@jpl.nasa.gov. Phone: 818-393-5815.

Primary URL: <http://saturn.jpl.nasa.gov/faq/index.cfm>

Scientist(s):	Dr. David Atkinson	University of Idaho	Moscow, ID
	Dr. David J. Atkinson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Larry Bryant	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Bonnie Buratti	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David Coppedge	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. David Doody	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Stephen Edberg	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Scott Edgington	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Kevin Grazier	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jane Houston Jones	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jane Jones	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Shannon McConnell	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Ms. Trina Ray	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Amy Simon-Miller	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Shaun Standley	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Lisa Tatge	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Julie Taylor	Desert Trails School	Adelanto, CA
	Ms. Julie Webster	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Oct 04	02 Oct 04	DePaul University—Chicago, IL	150	0	0
06 Oct 04	06 Oct 04	Gustav's Jagerhaus—Anaheim, CA	30	0	0
09 Oct 04	09 Oct 04	Swift Gallery—Los Angeles, CA	40	0	0
19 Oct 04	19 Oct 04	Pasadena Jewish Temple—Pasadena, CA	25	0	0
20 Oct 04	20 Oct 04	NASA Ames Research Center—Moffett Field, CA	100	0	0
23 Oct 04	23 Oct 04	Girl Scouts Camp Mariposa—Altadena, CA	80	0	0
04 Nov 04	06 Nov 04	National Science Teachers Association Regional Conference—Indianapolis, IN	32	2700	0
06 Nov 04	08 Nov 04	Gheens Science Center and Rauch Planetarium—Louisville, KY	0	400	0
08 Jan 05	08 Jan 05	Oregon Museum of Science and Industry—Portland, OR	0	300	0
19 Feb 05	19 Feb 05	California Science Center—Los Angeles, CA	35	0	0
28 Mar 05	28 Mar 05	Moscow Rotary Club—Moscow, ID	20	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	200	25000	0
05 Apr 05	05 Apr 05	Amateur Astronomy Club of Pittsburgh—Sarver, PA	75	0	0
05 Apr 05	05 Apr 05	NASA Jet Propulsion Laboratory—Pasadena, CA	50	0	0
06 Apr 05	09 Apr 05	National Council for the Teachers of Mathematics—Anaheim, CA	150	15000	0
10 Apr 05	10 Apr 05	California State University, Northridge—Northridge, CA	38	0	0
15 Apr 05	15 Apr 05	March Air Force Base—Riverside, CA	60	0	0
30 Apr 05	30 Apr 05	NASA Jet Propulsion Laboratory—Pasadena, CA	25	0	0
04 May 05	04 May 05	NASA Jet Propulsion Laboratory—Pasadena, CA	150	0	0
06 May 05	06 May 05	Spokane Falls Community College—Spokane, WA	100	0	0
01 Jun 05	01 Jun 05	Gustav's Jagerhaus—Anaheim, CA	20	0	0

01 Jun 05	01 Jun 05	NASA Goddard Space Flight Center— Greenbelt, MD	20	0	0
05 Jun 05	05 Jun 05	NASA Goddard Space Flight Center— Greenbelt, MD	50	0	0
06 Jun 05	06 Jun 05	Yavapai Point Visitor Center, Grand Canyon— Grand Canyon, AZ	0	200	0
08 Jun 05	08 Jun 05	Descanso Gardens—La Ca-ada, CA	50	0	0
17 Jun 05	17 Jun 05	Science Pioneers—Kansas City, MO	200	0	0
23 Jun 05	23 Jun 05	Altadena Town and Country Club—Altadena, CA	30	0	0
24 Jun 05	24 Jun 05	California State University, Northridge— Northridge, CA	20	0	0
01 Jul 05	30 Aug 05	Yosemite National Park— Yosemite National Park, CA	0	800	0
09 Jul 05	09 Jul 05	Discovery Science Center—Santa Ana, CA	40	0	0
16 Jul 05	16 Jul 05	Oregon State University—Corvallis, OR	80	0	0
25 Jul 05	25 Jul 05	Marriott Hotel—Huntsville, AL	80	0	0
01 Aug 05	03 Aug 05	Chabot Space and Science Center—Oakland, CA	20	0	0
01 Sep 05	01 Sep 05	Oregon Star Party—Portland, OR	300	0	0
20 Sep 05	20 Sep 05	Warner Center Rotary Club—Woodland Hills, CA	20	0	0

A393. Chabot Science Center: Winter Solstice 2004

Theme(s): Heliophysics

Msn/Prgm: Solar-B[B87]

Description: In connection with the Sun-Earth Day 2005 Winter Solstice Webcast from Chaco Canyon, Chabot Science Center ran a daylong set of special public activities, which included viewing the Webcast from Chaco. Other activities included Build a Landscape -building clay dioramas of ancient solar observatories and natural alignments-solar observation, a viewing of the film Solarmax, and a viewing of the planetarium show "By the Light of the Sun."

Lead: Mr. Benjamin Burress, Chabot Space and Science Center, Oakland, CA 94619.

E-mail: bburress@chabotsspace.org. Phone: 510-336-7308.

Primary URL: <http://www.chabotsspace.org/vsc/solar/news/december2004-wintersolstice.asp>

Scientist(s): Dr. Gibor Basri University of California, Berkeley Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part	.Web Part.
21 Dec 04	21 Dec 04	Chabot Space and Science Center—Oakland, CA	0	850	0

A394. Cluster II: Public Talks

Theme(s): Heliophysics

Msn/Prgm: Cluster II[B81]

Description: This is an ongoing program of technical lectures, seminars, and popular-level science talks at science centers, museums, planetariums, and educational institutions covering all aspects of space weather, space science, and astrophysics.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Scientist(s): Dr. Ramona Kessel NASA Goddard Space Flight Center Greenbelt, MD

Dr. Patricia Reiff Rice University Houston, TX

Dr. Carolyn Sumners Houston Museum of Natural Science Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Aug 05	08 Aug 05	American Association of Physics Teachers Conference—Salt Lake City, UT	0	70	0

A395. Compact Reconnaissance Imaging Spectrometer for Mars (CRISM): Public Outreach

Theme(s): Planetary

Msn/Prgm: MRO[B102]

Description: The E/PO office helped scientists, engineers, and other team members become involved in the CRISM E/PO efforts and provided opportunities for general public outreach by supplying the resources necessary for the team members to talk to the general public, provide handouts, give demonstrations, and conduct activities related to the MRO/CRISM Instrument.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://crism.jhuapl.edu/>

Secondary

URL: <http://www.jhuapl.edu/>

Scientist(s): Mr. John Troll Johns Hopkins University Applied Physics
Laboratory Laurel, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
31 Jul 05	04 Aug 05	Optics & Photonics 2005—San Diego, CA	0	30	0

A396. "Cosmic Questions": Public Outreach Events

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SEU[B35], CXO[B44], GLAST[B47], GP-B[B48], HST[B49], Swift[B57], WMAP[B58], HEASARC[B65]
 Description: The SEU Forum works with museums hosting the Cosmic Questions traveling exhibition to support their planning and implementation of public outreach events associated with the exhibition. This support includes giving advice and consultation regarding potential appropriate events and programs, identifying potential science speakers, and providing links to relevant resources and educational materials for their audiences.
 Lead: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: mdussault@cfa.harvard.edu. Phone: 617-496-7962.
 Primary URL: <http://cfa-www.harvard.edu/seuforum/exhibit/>
 Scientist(s): Dr. Xiaohui Fan University of Arizona Tucson, AZ
 Dr. Tom Fleming University of Arizona Tucson, AZ
 Partner(s): NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
04 Dec 04	04 Dec 04	Flandrau Science Center—Tucson, AZ	0	175	0
18 Dec 04	18 Dec 04	Flandrau Science Center—Tucson, AZ	0	130	0
25 Feb 05	25 Feb 05	Museum of the Rockies—Bozeman, MT	0	325	0

A397. Deep Impact: Amateur Astronomers Partnership

Theme(s): Planetary
 Msn/Prgm: Deep Impact[B108]
 Description: The Deep Impact outreach team spoke at several amateur astronomer events over the year, sharing the background of the Deep Impact mission and preparing observers to watch for comet Tempel 1. Amateur astronomers were invited to submit their images and data to the Small Telescope Science Program (STSP) Web site, which is a link off the main Deep Impact Web site.
 Lead: Dr. Lucy McFadden, University of Maryland, College Park, MD 20742. E-mail: McFadden@astro.umd.edu.
 Phone: 301-405-2081.
 Primary URL: <http://deepimpact.astro.umd.edu/stsp>
 Secondary URL: <http://deepimpact.astro.umd.edu/amateur>
 Scientist(s): Dr. Karen Meech University of Hawaii at Manoa Honolulu, HI
 Ms. Elizabeth Warner University of Maryland College Park, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
18 Oct 04	18 Oct 04	Elementary School—Reykjavik, Iceland	25	0	0
12 Feb 05	12 Feb 05	Camp Wesumkee—West Summerland, FL	60	0	0
02 Jun 05	02 Jun 05	Cherry Springs Star Party—Galeton, PA	0	60	0
04 Jun 05	04 Jun 05	Cross Ranch State Park—Bismarck, ND	0	50	0
16 Jun 05	16 Jun 05	Roper Mountain Science Center—Greenville, NC	0	40	0
29 Sep 05	29 Sep 05	University of Hawaii at Hilo—Hilo, HI	0	50	50

A398. Deep Impact: Public/Informal Events

Theme(s): Planetary
 Msn/Prgm: Deep Impact[B108]
 Description: The Deep Impact mission had a landmark year, primarily because of our multiyear investment in programs like the Solar System Ambassadors, the Solar System Educators, the Museum Alliance, the Night Sky Network, the Girl Scouts of the USA, and others who hosted Deep Impact events on the mission's behalf. For the years and months prior to encounter, the mission invested heavily in telecon trainings for these groups. Within some cities, events were organized by several people from different programs working together. A good example is the Hawaiian Islands, where the Solar System Educators and Ambassadors, Museum Alliance, Girl Scouts, and Night Sky Network all led integrated informal events, activities, and workshops. Ten thousand gathered on the beach in Waikiki to take advantage of a large screen while lectures and impact events took place at the University of Hawaii, Bishop Museum, and locations on other islands. A Girl Scout Getaway to bring teams of Leaders and scouts together to learn about NASA observation techniques and Hawaiian navigation and culture also provided an opportunity for the girls to work with the Night Sky Network and our Ambassadors. On the other end of Hilo, a weeklong educator workshop featured Deep Impact and learning science through story, song, and creative presentation using the mission's education activities. All groups had an encounter evening experience. This kind of effort by partners to the Deep Impact mission was reflected across the United States over the summer and fall, when the mission's planetarium show, video by Dan Maas, and team video produced by JPL were all heavily used and enhanced for a unique presentation to thousands of adults and children.
 Lead: Dr. Lucy McFadden, University of Maryland, College Park, MD 20742. E-mail: McFadden@astro.umd.edu.
 Phone: 301-405-2081.
 Primary URL: <http://deepimpact.astro.umd.edu/community/index.html>

Scientist(s):	Dr. Michael A'Hearn	University of Maryland	College Park, MD
	Mr. David Acton	Ball Aerospace Technologies Corporation	Boulder, CO
	Ms. Denise Cook-Clampert	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Jim Crane	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Tom Estill	Chabot Space and Science Center	Oakland, CA
	Dr. Tony Farnham	University of Maryland	College Park, MD
	Dr. Yanga Fernandez	University of Hawaii at Hilo	Hilo, HI
	Mr. Keven Forbes	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Rod Gillard	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Colin Graham	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Monte Henderson	Ball Aerospace Technologies Corporation	Boulder, CO
	Mr. Naruki Hirai	University of Maryland	College Park, MD
	Ms. Meredith Larson	Ball Aerospace Technologies Corporation	Boulder, CO
	Dr. Laurie Leshin	Arizona State University	Tempe, AZ
	Dr. Carey Lisse	University of Maryland	College Park, MD
	Mr. Jonathan Mah	Ball Aerospace Technologies Corporation	Boulder, CO
	Dr. Lucy McFadden	University of Maryland	College Park, MD
	Ms. Stephanie McLaughlin	University of Maryland	College Park, MD
	Dr. Karen Meech	University of Hawaii at Manoa	Honolulu, HI
	Ms. Maura Rountree-Brown	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Bill Smythe	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jessica Sunshine	Science Applications International Corporation (SAIC)	Chantilly, VA
	Ms. Jennifer Turner-Valle	Ball Aerospace Technologies Corporation	Boulder, CO
	Ms. Elizabeth Warner	University of Maryland	College Park, MD
	Dr. Donald Yeomans	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	07 Oct 04	07 Oct 04	University of Maryland—College Park, MD	16	0	0
	14 Oct 04	14 Oct 04	University of Maryland—College Park, MD	30	2	0
	16 Oct 04	16 Oct 04	Mid-Atlantic Star Party—Carthage, NC	0	65	0
	19 Oct 04	19 Oct 04	University of Maryland—College Park, MD	5	2	0
	20 Oct 04	20 Oct 04	Mather Center—Harpers Ferry, WV	5	30	0
	25 Oct 04	25 Oct 04	Roots Elementary School—Washington, DC	62	0	0
	09 Dec 04	09 Dec 04	Cold Spring Elementary School—Potomac, MD	30	0	0
	11 Dec 04	11 Dec 04	Maryland Science Center—Baltimore, MD	60	0	0
	29 Dec 04	29 Dec 04	NASA Kennedy Space Center Visitor Center—Kennedy Space Center, FL	0	3700	0
	11 Jan 05	11 Jan 05	Ron Jon's Cape Caribe Resort—Cape Canaveral, FL	4	36	0
	26 Jan 05	26 Jan 05	University of Maryland—College Park, MD	0	5000	0
	01 May 05	31 Jul 05	Fiske Planetarium—Boulder, CO	98	72	0
	14 May 05	03 Jul 05	Arizona Science Center—Phoenix, AZ	0	2000	0
	19 May 05	02 Aug 05	Museum of Arts and Sciences—Macon, GA	0	4351	0
	01 Jun 05	31 Jul 05	Episphere Digital Dome—Little Rock, AR	500	1500	0
	01 Jun 05	31 Jul 05	Navarro College Planetarium—Corsicana, TX	0	520	0
	01 Jun 05	31 Jul 05	U.S. Space and Rocket Center—Huntsville, AL	612	0	0
	01 Jun 05	30 Sep 05	St. Mark's School of Texas—Dallas, TX	411	110	0
	04 Jun 05	04 Jun 05	University of California, Davis—Davis, CA	0	55	0
	05 Jun 05	15 Aug 05	McDonald Observatory—Fort Davis, TX	0	2291	0
	09 Jun 05	09 Jun 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	335	0
	13 Jun 05	03 Jul 05	Fernbank Science Center—Atlanta, GA	85	254	0
	19 Jun 05	09 Jul 05	Casper Planetarium—Casper, WY	0	160	0
	21 Jun 05	21 Jun 05	Institute for Astronomy—Honolulu, HI	200	200	200
	27 Jun 05	27 Jun 05	University of Hawaii at Hilo—Hilo, HI	0	125	0
	27 Jun 05	04 Jul 05	University of Hawaii at Hilo—Hilo, HI	20	6	0
	28 Jun 05	10 Jul 05	Casper Planetarium—Casper, WY	0	155	0
	01 Jul 05	10 Jul 05	Bishop Museum—Honolulu, HI	0	3000	0
	02 Jul 05	02 Jul 05	Golden Pond Planetarium—Golden Pond, KY	24	67	0
	02 Jul 05	02 Jul 05	Golden Pond Planetarium—Golden Pond, KY	24	73	0
	02 Jul 05	03 Jul 05	Discovery Science Center—Santa Ana, CA	0	1581	0
	03 Jul 05	03 Jul 05	Kitt Peak National Observatory—Tohono O'odham Reservation, AZ	0	60	60
	03 Jul 05	03 Jul 05	Maui Community College—Kaahumanu-Kahului, HI	0	500	0
	03 Jul 05	03 Jul 05	Oregon Museum of Science and Industry—Portland, OR	0	275	0

03 Jul 05	03 Jul 05	Red River Astronomy Club Observatory— Nashville, AR	10	20	0
03 Jul 05	03 Jul 05	University of Hawaii at Hilo—Hilo, HI	0	200	0
03 Jul 05	03 Jul 05	University of Hawaii at Hilo—Hilo, HI	0	750	0
03 Jul 05	03 Jul 05	University of Hawaii at Manoa—Honolulu, HI	0	10000	0
03 Jul 05	03 Jul 05	W.M. Keck Observatory—Kamuela, HI	0	525	0
03 Jul 05	04 Jul 05	Calgary Science Center—Calgary, Canada	0	400	0
03 Jul 05	04 Jul 05	Fiske Planetarium—Boulder, CO	0	600	0
03 Jul 05	04 Jul 05	Planetary Society—Pasadena, CA	0	750	0
03 Jul 05	10 Jul 05	Virginia Living Museum—Newport News, VA	0	300	0
04 Jul 05	04 Jul 05	Arizona Science Center—Phoenix, AZ	0	700	0
04 Jul 05	04 Jul 05	Denver Museum of Nature and Science— Denver, CO	0	800	0
04 Jul 05	04 Jul 05	Fiske Planetarium—Boulder, CO	0	250	0
04 Jul 05	04 Jul 05	Fiske Planetarium—Boulder, CO	200	0	0
04 Jul 05	04 Jul 05	H.R. MacMillan Space Centre—Vancouver, Canada	0	175	0
04 Jul 05	04 Jul 05	Maryland Science Center—Baltimore, MD	0	650	0
04 Jul 05	04 Jul 05	University of Arizona—Tucson, AZ	0	320	0
08 Jul 05	08 Jul 05	Exploratorium—San Francisco, CA	362	0	0
10 Jul 05	10 Jul 05	Chabot Space and Science Center— Oakland, CA	0	100600	0
20 Jul 05	20 Jul 05	COSI Toledo—Toledo, OH	0	600	0
30 Aug 05	31 Aug 05	Long Beach Convention Center—Long Beach, CA	320	225	0
30 Sep 05	30 Sep 05	University of Central Florida—Orlando, FL	0	25	25

A399. Deep Space Network (DSN): Public Events

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: The Deep Space Network provides two-way communication between Earth and spacecraft that are exploring the solar system in deep space. Managers and engineers from the DSN take advantage of opportunities to attend conferences and exhibits aimed at industry peers, as well as giving presentations to the public at large in a variety of venues, including civic groups, amateur radio clubs, and community events.

Contact: Ms. Shirley Wolff, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: shirley.e.wolff@jpl.nasa.gov. Phone: 818-354-4069.

Primary URL: <http://deepspace.jpl.nasa.gov/dsn>

Scientist(s):	Mr. Mark Gatti	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Karen Meech	University of Hawaii at Manoa	Honolulu, HI
	Mr. Joseph Statman	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Shirley Wolff	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
21 Mar 05	21 Mar 05	Barstow College—Barstow, CA	0	46	0
22 Mar 05	22 Mar 05	Hilton Hotel Las Cruces—Las Cruces, NM	0	50	0
09 Sep 05	09 Sep 05	University of Hawaii—Honolulu, HI	0	300	300

A400. Electromagnetic Radiation, Infrared Astronomy, and SOFIA (Yerkes Observatory)

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: This program incorporates a brief Description: of the SOFIA mission and "Active Astronomy" kit demonstrations for the development of tours, programs, and general outreach programs for students, teachers, and the general public visiting Yerkes Observatory or to be conducted onsite in nearby schools. SOFIA and infrared handouts and Web site information are provided.

Lead: Ms. Vivian Hoette, Yerkes Observatory, University of Chicago, Williams Bay, WI 53191.
E-mail: vhoette@yerk.es.uchicago.edu. Phone: 262-245-5555.

Primary URL: <http://astro.uchicago.edu/yerk.es/outreach>

Scientist(s):	Mr. Al Harper	NASA Space Science Center at DePaul University	Chicago, IL
	Ms. Vivian Hoette	Yerkes Observatory, University of Chicago	Williams Bay, WI
	Mr. Bob Pernic	Yerkes Observatory, University of Chicago	Williams Bay, WI
	Dr. James Sweitzer	DePaul University	Chicago, IL
	Mr. Kenneth Urban	Southfield High School	Southfield, MI
	Mr. John Wirth	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Oct 04	05 Oct 04	Yerkes Observatory, University of Chicago— Williams Bay, WI	4	0	0
20 Oct 04	20 Oct 04	Southfield High School—Southfield, MI	23	0	0
15 Nov 04	15 Nov 04	Yerkes Observatory, University of Chicago— Williams Bay, WI	68	0	0

06 May 05	06 May 05	Yerkes Observatory, University of Chicago— Williams Bay, WI	13	0	0
11 Jun 05	11 Jun 05	Yerkes Observatory, University of Chicago— Williams Bay, WI	25	0	0
13 Jul 05	19 Jul 05	Yerkes Observatory, University of Chicago— Williams Bay, WI	2	0	0

A401. Explorer Institute

Theme(s): Earth Science

Msn/Prgm: Aura[B3]

Description: NASA scientists gave presentations and discussed fundamental issues of climate change.

Contact: Ms. Jeannie Allen, Science Systems and Applications, Inc., Lanham, MD 20706.

E-mail: jeallen@pop900.gsfc.nasa.gov. Phone: 301-614-6457.

Partner(s): NASA Ames Research Center

Moffett Field, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Oct 04	19 Oct 04	NASA Goddard Space Flight Center— Greenbelt, MD	0	60	0
21 Oct 04	21 Oct 04	NASA Goddard Space Flight Center— Greenbelt, MD	10	0	0

A402. Exploring Beyond Einstein: NASA's Search for Answers

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: This public lecture on the science and missions involved in NASA's Beyond Einstein program introduces attendees to important scientific topics and questions that will be addressed with current and planned Beyond Einstein missions.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.Primary URL: <http://universe.nasa.gov/>

Scientist(s): Dr. James Lochner

NASA Goddard Space Flight Center

Greenbelt, MD

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
12 May 05	12 May 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	120	0

A403. GLAST: Public Presentations

Theme(s): Astrophysics

Msn/Prgm: GLAST[B47]

Description: The Extreme Universe of Gamma-ray Astronomy! includes GLAST public presentations, public lectures, demonstrations, and interactive workshops featuring the science and technology of the GLAST mission, including topics ranging from supermassive black holes in the cores of distant galaxies to gamma-ray explosions that produce unimaginable amounts of energy. GLAST materials are often distributed.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu. Phone: 707-664-2655.Primary URL: <http://glast.sonoma.edu>

Secondary

URL: <http://glast.sonoma.edu/resources/index.html>

Scientist(s):	Mr. Jeff Adkins	Deer Valley High School	Antioch, CA
	Dr. Lynn Cominsky	Sonoma State University	Rohnert Park, CA
	Ms. Teena Della	Terry Fox Secondary School	Port Coquitlam, Canada
	Mr. Walter Glogowski	Ridgewood High School	Norridge, IL
	Mr. Tim Graves	Sonoma State University	Rohnert Park, CA
	Ms. Janet Moore	Challenger Learning Center at Prairie Aviation Museum	Bloomington, IL
	Mr. J. Myers	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA
	Ms. Aurore Simonnet	Sonoma State University	Rohnert Park, CA
	Dr. Gordon Spear	Sonoma State University	Rohnert Park, CA
	Mr. Daryl Taylor	Williamstown High School	Williamstown, NJ
	Ms. Pamela Whiffen	Palo Verde Middle School	Phoenix, AZ

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Nov 04	21 Nov 04	Australian Museum, The—Sydney, Australia	340	0	0
01 Jan 05	01 Jan 05	"Optics & Photonics News"—Washington, DC	0	16000	0
24 Jan 05	24 Jan 05	California Academy of Science/Jewish Community Center—San Francisco, CA	0	100	0

10 Feb 05	10 Feb 05	San Joaquin Delta College—Stockton, CA	10	1	0
21 Mar 05	23 Mar 05	3rd High-Energy Astrophysics Workshop for Amateur Astronomers—Las Cruces, NM	0	100	0
21 Mar 05	23 Mar 05	3rd High-Energy Astrophysics Workshop for Amateur Astronomers—Las Cruces, NM	92	0	0
13 Apr 05	16 Apr 05	Southwestern and Rocky Mountain Conference of the American Association for the Advancement of Science—Tucson, AZ	10	16	0
15 Apr 05	17 Apr 05	Holton High School—Holton, KS	0	75	0
16 Apr 05	16 Apr 05	Franklin Institute Science Museum—Philadelphia, PA	86	0	0
23 Apr 05	23 Apr 05	Challenger Learning Center at Prairie Aviation Museum—Bloomington, IL	10	0	0
12 May 05	12 May 05	Sonoma State University—Rohnert Park, CA	0	12	0
01 Jul 05	01 Jul 05	"California Wild" magazine—San Francisco, CA	0	16000	0
29 Jul 05	29 Jul 05	Wabash County Astronomical Society—Wabash, IN	40	0	0

A404. Goddard Days

Theme(s): Heliophysics

Msn/Prgm: LWS/PO[B90]

Description: Imagine you're a parent and your child has worked hard and been admitted to a talented and gifted program at school. Now, imagine that the new superintendent of your child's school decides to eradicate science, all science, from your child's school curriculum. Why? The superintendent believes that "No Child Left Behind" means that if you don't have the resources to offer science to all children, you eliminate it and concentrate on reading, writing, and arithmetic. Then, when questioned about his decision, he informs you that the initiative is open to interpretation and that is how he interprets it. What do you do? Well, if you are a group of mothers with kids in Roswell, NM, schools, you get angry, and then you get busy. Roswell hosted the second annual Goddard Days Science and Discovery Festival on April 4-29, 2005. NASA STP/LWS Education and Public Outreach education specialists worked with the general public and students on hands-on activities. Information about the Sun was given to teachers, students, and community center personnel. "We are so excited that NASA is coming to Roswell for the second time!" says Carrie Hollifield, chairperson of the Roswell Goddard Days Committee. We are a small community but don't want our children to miss the opportunity to experience science. We want them to know that science can be fun. The outreach activity reached an underserved population of over a thousand students a day, with an emphasis on grades 1-6.

Lead: Mr. Mitchell Watkins, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: mwatkins@i-c-t.com. Phone: 301-982-1964.Primary URL: <http://stargazers.gsfc.nasa.gov>

Secondary

URL: <http://lws.gsfc.nasa.gov>

Scientist(s):	Ms. Sara Brown	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Omar Eaton	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Laura Ratta	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Mitchell Watkins	NASA Goddard Space Flight Center	Greenbelt, MD
Partner(s):	Roswell Independent School District		Roswell, NM

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
04 Apr 05	09 Apr 05	Roswell Convention Center—Roswell, NM	3250	175	0

A405. Goldstone Communications Complex: Public Tours

Theme(s): Planetary

Msn/Prgm: DSMS[B114]

Description: Goldstone tours begin at the Goldstone Museum with videos and presentations on the current missions supported in the Deep Space Network. This is followed by a driving tour of the 53-square-mile complex to view eight large antennas and the Operations Control Center-Signal Processing Center 10. The last stop is a visit to the pedestal-room museum located in the large, 70-meter antenna.

Lead: Ms. Marie Massey, Goldstone Deep Space Communications Complex, Fort Irwin, CA 92310.

E-mail: Marie.massey@csconline.com. Phone: 760-255-8687.Primary URL: <http://gts.gscc.nasa.gov/>

Secondary

URL: <http://deepspace.jpl.nasa.gov/dsn/educ/index.html>

Scientist(s):	Ms. Gina Butcher	Goldstone Deep Space Communications Complex	Fort Irwin, CA
	Ms. Marie Massey	Goldstone Deep Space Communications Complex	Fort Irwin, CA
	Ms. Karla Warner	Goldstone Deep Space Communications Complex	Fort Irwin, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	05 Nov 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	192	0

09 Nov 04	03 Dec 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	114	0
06 Dec 04	31 Dec 04	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	65	0
03 Jan 05	20 Jan 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	59	0
24 Jan 05	18 Feb 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	73	0
22 Feb 05	31 Mar 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	368	0
01 Apr 05	30 Apr 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	124	0
01 May 05	30 May 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	99	0
01 Jun 05	30 Jun 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	162	0
01 Jul 05	31 Jul 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	325	0
01 Aug 05	31 Aug 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	172	0
01 Sep 05	30 Sep 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	0	51	0

A406. Goldstone Deep Space Communications Complex: Public Outreach

Theme(s): Planetary
Msn/Prgm: DSMS[B114]
Description: Goldstone's Public Outreach program is designed to reach community organizations through multimedia presentations and exhibits on the Deep Space Network's antennas and missions.
Contact: Ms. Marie Massey, Goldstone Deep Space Communications Complex, Fort Irwin, CA 92310.
E-mail: Marie.massey@csconline.com. Phone: 760-255-8687.
Primary URL: <http://deepspace.jpl.nasa.gov/dsn>
Scientist(s): Ms. Gina Butcher Goldstone Deep Space Communications Complex Fort Irwin, CA
Ms. Marie Massey Goldstone Deep Space Communications Complex Fort Irwin, CA
Ms. Karla Warner Goldstone Deep Space Communications Complex Fort Irwin, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
03 Dec 04	03 Dec 04	Barstow College—Barstow, CA	78	0	0
27 Apr 05	27 Apr 05	Barstow High School—Barstow, CA	300	100	0
27 Apr 05	27 Apr 05	Silver Valley High School—Yermo, CA	62	0	0
28 Apr 05	28 Apr 05	Mojave Historical Society—Victorville, CA	0	50	0
30 Apr 05	30 Apr 05	Desert Museum—Barstow, CA	0	500	0
07 Jul 05	07 Jul 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	25	0	0
16 Jul 05	16 Jul 05	Goldstone Deep Space Communications Complex—Fort Irwin, CA	75	0	0
28 Sep 05	28 Sep 05	Fort Irwin Military Reservation—Fort Irwin, CA	0	300	0

A407. GRACE: UT Explore

Theme(s): Earth Science
Msn/Prgm: GRACE[B4]
Description: GRACE information was provided through an educational exhibit during the UT Explore University of Texas open house; over 3,000 people visited the booth. GRACE posters, lithographs, and educational materials were exhibited, and educators were invited to take copies of the curriculum to follow this gravity mission.
Lead: Ms. Margaret Baguio, University of Texas at Austin, Austin, TX 78712. E-mail: baguio@tsgc.utexas.edu.
Phone: 512-471-6922.
Primary URL: <http://www.csr.utexas.edu/grace>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
05 Mar 05	05 Mar 05	University of Texas at Austin—Austin, TX	0	3000	0

A408. Gravity Probe B: Mission Operations Control Tours

Theme(s): Astrophysics
Msn/Prgm: GP-B[B48]
Description: Participants are given a tour of the physics laboratories where the GP-B spacecraft and equipment were engineered and built, a tour of Mission Operations Control (MOC) in action, and a lecture/demonstration explaining the GP-B mission. Some participants are guided through telemetry-monitoring exercises in the MOC.
Lead: Ms. Shannon Range, Stanford University, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.
Primary URL: <http://einstein.stanford.edu>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
28 Apr 05	28 Apr 05	Stanford University—Stanford, CA	0	14	0
05 May 05	05 May 05	Stanford University—Stanford, CA	3	18	0

A409. Hubble Space Telescope: Speaker's Bureau

Theme(s): Astrophysics

Msn/Prgm: HST[B49]

Description: The Space Telescope Science Institute's (STScI) Office of Public Outreach fulfills local and regional requests for Hubble Space Telescope (HST) presentations. STScI science and technical staff volunteer to present on a range of HST topics including the telescope, recent HST discoveries, and careers in science and technology. Speaker requests come from a variety of sources, such as schools, Boy/Girl Scout troops, science centers, museums and planetariums, amateur astronomy organizations, and senior/retirement centers.

Lead: Dr. Bruce Margon, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: margon@stsci.edu. Phone: 410-338-4459.

Scientist(s):	Dr. Harry Ferguson	Space Telescope Science Institute	Baltimore, MD
	Mr. Mark Kochte	Space Telescope Science Institute	Baltimore, MD
	Dr. Mario Livio	Space Telescope Science Institute	Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
23 Oct 04	23 Oct 04	Westminster Girl Scouts—Westminster, MD	0	150	0
28 Oct 04	28 Oct 04	Harvard-Radcliffe Club of Baltimore— Baltimore, MD	0	40	0
04 Feb 05	04 Feb 05	University of Toledo—Toledo, OH	0	500	0
14 Jul 05	14 Jul 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	500	0

A410. IMAGE: Public Talks

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: IMAGE[B75]

Description: This is an ongoing program of technical lectures, seminars, and popular-level science talks at science centers, museums, planetariums, and educational institutions covering all aspects of space weather, space science, and astrophysics.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov>

Secondary

URL: <http://www.astronomycafe.net>

Scientist(s): Dr. Patricia Reiff Rice University

Partner(s): American Astronomical Society

Houston, TX
Washington, DC

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
28 Oct 04	28 Oct 04	Rice University—Houston, TX	0	39	0
26 Feb 05	26 Feb 05	Houston Museum of Natural Science—Houston, TX	0	100	0
06 Mar 05	06 Mar 05	Houston Museum of Natural Science—Houston, TX	0	500	0

A411. IMAGE: Radio Programs

Theme(s): Heliophysics, Planetary

Msn/Prgm: IMAGE[B75]

Description: A collection of radio interviews have been conducted, featuring IMAGE team members discussing the topics of space weather and the transit of Venus.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Primary URL: <http://image.gsfc.nasa.gov/poetry/image3.html>

Secondary

URL: <http://image.gsfc.nasa.gov/poetry/venus/venus.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center

Partner(s): Starizona-Adventures In Astronomy & Nature

Greenbelt, MD
Tucson, AZ

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Aug 05	16 Aug 05	Starizona-Adventures In Astronomy & Nature— Tucson, AZ	0	500000	0

A412. IMAGE: Webcast

Theme(s): Heliophysics, Planetary

Msn/Prgm: SECEF[B36], IMAGE[B75]

Description: Webcasting technology is an exciting new venue for communicating space science. In partnership with the NASA Sun-Earth Connection Education Forum, IMAGE has supported Webcasting by providing scientific content and personnel.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
20 Mar 05	20 Mar 05	Houston Museum of Natural Science—Houston, TX	0	300	150

A413. Immersive Earth: Public Outreach and Education

Theme(s): Heliophysics, Planetary

Msn/Prgm: Immersive Earth[B18]

Description: Immersive Earth presents productions, products, and materials at a wide variety of public events. These can be in conjunction with occasions like Earth Day, in celebration of show or exhibit openings, or as part of many other festivities.

Contact: Dr. Kerry Handron, Carnegie Museum of Natural History, Pittsburgh, PA 15213.

E-mail: HandronK@CarnegieMNH.Org. Phone: 412-578-2580.

Primary URL: <http://earth.rice.edu>

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX
Dr. Carolyn Sumners Houston Museum of Natural Science Houston, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
09 Oct 04	09 Oct 04	Houston Museum of Natural Science—Houston, TX	0	400	0
06 Mar 05	06 Mar 05	Houston Museum of Natural Science—Houston, TX	0	500	0
30 Apr 05	30 Apr 05	Reliant Astrodome—Houston, TX	0	300	0

A414. Magnetospheric MultiScale (MMS): Workshop and Conference Presentations

Theme(s): Heliophysics

Msn/Prgm: IMAGE[B75], MMS[B86]

Description: Conferences, planetarium shows, and teacher workshops presenting Magnetospheric MultiScale mission and science activities and information.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, Houston, TX 77251-1892. E-mail: djensen@rice.edu.
Phone: 713-349-1800.

Primary URL: <http://space.rice.edu/MMS>

Secondary

URL: <http://MMS.space.swri.edu>

Scientist(s): Dr. Patricia Reiff Rice University Houston, TX

Partner(s): Houston Museum of Natural Science Houston, TX
NASA Goddard Space Flight Center Greenbelt, MD
Southwest Research Institute San Antonio, TX
University of Colorado, Boulder Boulder, CO
University of Texas at Austin Austin, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
23 May 05	27 May 05	American Geophysical Union Annual Summer Meeting—New Orleans, LA	0	80	0

A415. Mars: Documentary Interviews

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars Public Engagement visualizations and video products contribute to formal education (multimedia products for use as supplements to curricula in providing role models and scientific content Description:s), informal education (high-definition products for Mars Museum Alliance partners), and public outreach (Internet stories and accompanying videos). The reach of these efforts is measured in other Mars Public Engagement activities. This activity captures the names of Mars scientists, engineers, and staff who have given their time and made a contribution to this crosscutting area of education and public outreach.

Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov.
Phone: 818-354-8774.

Contact: Mr. John Beck, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Rino.J.Passaniti@jpl.nasa.gov.
Phone: 818-354-2157.

Scientist(s): Mr. Arden Acord NASA Jet Propulsion Laboratory Pasadena, CA
Mr. Mark Adler NASA Jet Propulsion Laboratory Pasadena, CA
Dr. Raymond Arvidson Washington University St. Louis, MO
Dr. Deborah Bass NASA Jet Propulsion Laboratory Pasadena, CA
Mr. Doug Beasley NASA Jet Propulsion Laboratory Pasadena, CA
Dr. John G. Beck Stanford University Stanford, CA
Ms. Sheryl Bergstrom NASA Jet Propulsion Laboratory Pasadena, CA
Mr. Jeff Biesiadecki NASA Jet Propulsion Laboratory Pasadena, CA
Dr. Bill Boynton University of Arizona Tucson, AZ

Dr. John Callas	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Faustino Chirino	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Phil Christensen	Arizona State University	Tempe, AZ
Mr. Steve Collins	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Jessica Collisson	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Eric DeJong	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. David Delgado	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Laryssa Densmore	Lockheed Martin Space Systems	Littleton, CO
Mr. George Diller	NASA Kennedy Space Center	Kennedy Space Center, FL
Mr. Chuck Dovale	NASA Kennedy Space Center	Kennedy Space Center, FL
Ms. Tracy Drain	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Howard Eisen	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Heather Enos	University of Arizona	Tucson, AZ
Mr. Jim Erickson	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Paul Fieseler	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Orlando Figueroa	NASA Headquarters Science Mission Directorate	Washington, DC
Mr. Clay Flinn	Patrick Air Force Base	Patrick Air Force Base, FL
Mr. Vazrik Gharakanian	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Barry Goldstein	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Zareh Gorjian	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jim Graf	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Paul Hardy	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Tammy Harrington	NASA Kennedy Space Center	Kennedy Space Center, FL
Ms. Pauline Hwang	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Moriba Jah	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Geoffrey Lake	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Syd Lieberman	International Storytelling Center	Jonesborough, TN
Ms. Stephenie Lievense	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Mark Maimone	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Charles Manning	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Rob Manning	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Dan McCleese	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Doug McCuistion	NASA Headquarters	Washington, DC
Mr. Gaylon McSmith	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Richard Morris	NASA Johnson Space Center	Houston, TX
Dr. Firouz Naderi	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Tiffany Nail	NASA Kennedy Space Center	Kennedy Space Center, FL
Dr. Jeffrey Plaut	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Peter Poon	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Fadi Riman	NASA Johnson Space Center	Houston, TX
Mr. Tommaso Rivellini	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Dave Senske	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Colleen Sharkey	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Patricia Smith	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jonathan Stabb	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Adam Steltzner	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Kevin Talley	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Leslie Tamppari	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Pete Theisinger	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Jody Tobin	NASA Kennedy Space Center	Kennedy Space Center, FL
Ms. Julie Townsend	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Ramona Tung	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Joan Underwood	Lockheed Martin Space Systems	Littleton, CO
Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Randy Walker	Lockheed Martin Space Systems	Littleton, CO
Mr. David Welch	Lockheed Martin Space Systems	Littleton, CO
Ms. Alice Wessen	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Randii Wessen	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Aimee Whalen	NASA Jet Propulsion Laboratory	Pasadena, CA

Mr. James Wood	NASA Kennedy Space Center	Kennedy Space Center, FL
Mr. Peter Xaypraseuth	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Serjik Zadourian	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Neal Zapp	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Cary Zeitlin	Lawrence Berkeley National Laboratory	Berkeley, CA
Dr. Rich Zurek	NASA Jet Propulsion Laboratory	Pasadena, CA

A416. Mars: Lectures at Museums and Other Informal Education Venues

Theme(s): Planetary
Msn/Prgm: Mars Public Engagement[B97]
Description: Mars scientists and engineers support public events at museums, science centers, and planetariums through public talks and lectures.
Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov. Phone: 818-354—8774.

Scientist(s):	Ms. Jaime Dyk	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Connie Gennaro	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Albert Haldemann	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Dr. Tom Nolan	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Terry Wysocky	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	23 Jan 05	23 Jan 05	Los Angeles Valley College—Valley Glen, CA	33	0	0
	29 Jan 05	30 Jan 05	North Carolina Museum of Natural Sciences—Raleigh, NC	0	12500	0
	13 Feb 05	13 Feb 05	California Oil Museum—Santa Paula, CA	78	0	0
	05 May 05	05 May 05	National Air and Space Museum Steven F. Udvar-Hazy Center—Chantilly, VA	0	4500	0
	13 Aug 05	13 Aug 05	COSI Toledo—Toledo, OH	0	650	0
	27 Aug 05	27 Aug 05	Marine Science Laboratory—Catalina Island, CA	0	72	0

A417. Mars: Public Talks

Theme(s): Planetary
Msn/Prgm: Mars Public Engagement[B97]
Description: Mars scientists and engineers give public talks nationwide.
Contact: Ms. Connie Gennaro, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Consuelo.Gennaro@jpl.nasa.gov. Phone: 818-393-2502.

Scientist(s):	Mr. Chuck Acton	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Mark Adler	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Hrand Aghazarian	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jaime Ahumada	Arizona State University	Tempe, AZ
	Mr. Bryan Allen	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Dr. Bob Anderson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Robert Anderson	Nogales High School	Nogales, AZ
	Mr. Ron Baalke	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Enrique Baez	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Erik Bailey	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Darren Baird	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Alireza Bakhshi	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Todd Barber	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jack Barengoltz	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Deborah Bass	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Eric Baumgartner	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Todd Bayer	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Erica Beam	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John G. Beck	Stanford University	Stanford, CA
	Dr. Julia Bell	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Gaj Birur	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Diana Blaney	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Diane Bollen	Cornell University	Ithaca, NY
	Ms. Joy Bottenfield	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Kirk Breitenbach	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Nathan Bridges	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jared Call	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John Callas	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jeffrey Chin	NASA Jet Propulsion Laboratory	Pasadena, CA

Dr. Phil Christensen	Arizona State University	Tempe, AZ
Ms. Nagin Cox	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Mary Davis	Arizona State University	Tempe, AZ
Mr. David Delgado	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Linda Doran	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Tracy Drain	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Riley Duren	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Emily Eelkema	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Charles Elachi	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kristen Ellis	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jim Erickson	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. William Farrand	Space Science Institute	Boulder, CO
Mr. Jeff Favretto	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Brenda Franklin	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Mark Garcia	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Michael Garrett	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Connie Gennaro	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Saina Ghandchi	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Peter Gluck	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Pawan Gogna	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Matthew Gonzales	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Rob Grover	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Joe Guinn	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jose Guzman	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Amy Hale	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Samad Hayati	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Cate Heneghan	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Dolan Highsmith	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Meg Hufford	Arizona State University	Tempe, AZ
Mr. Scott Hulme	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Terry Huntsberger	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Chialan Hwang	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Moriba Jah	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Jackie Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Dan Johnston	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Brett Kennedy	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Sheri Klug	Arizona State University	Tempe, AZ
Dr. Samuel Kounaves	Tufts University	Medford, MA
Dr. Gerhard Kruizinga	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Stephanie Lear	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Yvette Lerma	Nogales High School	Nogales, AZ
Mr. Christopher Lewicki	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Fuk Li	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Stephenie Lievense	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Douglas Lombardi	University of Arizona	Tucson, AZ
Ms. Leila Lorenzoni	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Lee Magnone	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Mark Maimone	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Anthony Maldonado	Arizona State University	Tempe, AZ
Dr. Mike Malin	Malin Space Science Systems	La Jolla, CA
Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Scott Maxwell	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Jose Luis Maytorena	Nogales High School	Nogales, AZ
Dr. Dan McCleese	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Greg Mehall	Arizona State University	Tempe, AZ
Ms. Susan Merrill	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Nycole Miller	Arizona State University	Tempe, AZ
Dr. Douglas Ming	NASA Johnson Space Center	Houston, TX
Mr. Roy Nakagawa	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Janis Norman	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Adriana Ocampo	NASA Headquarters Science Mission Directorate	Washington, DC
Mr. Avi Okon	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. George Pace	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Rino Passaniti	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Jeffrey Plaut	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Peter Poon	NASA Jet Propulsion Laboratory	Pasadena, CA

Mr. Eduardo Ramirez	Arizona State University	Tempe, AZ
Ms. Serene Rawlings	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Jim Rice	Arizona State University	Tempe, AZ
Dr. Matt Robinson	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. James Rose	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Ali Safaeinili	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Susan Sakimoto	NASA Goddard Space Flight Center	Greenbelt, MD
Mr. Lawrence Scherr	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Eric Schwartzbaum	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Dave Senske	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Andy Shaner	University of Arizona	Tucson, AZ
Ms. Colleen Sharkey	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Robert Sharrow	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Richard Shope	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Robert Shotwell	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Kyle Simek	Arizona State University	Tempe, AZ
Dr. Peter H. Smith	University of Arizona	Tucson, AZ
Mr. Steve Smith	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Nathan Snider	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Suzanne Spitz	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Steve Squyres	Cornell University	Ithaca, NY
Mr. Ken Starr	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Ashley Stroupe	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Rob Sullivan	Cornell University	Ithaca, NY
Mr. Farinaz Tehrani	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Avo Terzian	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Tommy Thompson	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
Ms. Julie Townsend	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Lynn Tran	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Mark Underwood	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Paige Valderrama	Arizona State University	Tempe, AZ
Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Mike Watkins	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Rick Welch	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Lelie White	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Steven Williams	Smithsonian National Air and Space Museum (NASM)	Washington, DC
Mr. James Wincentsen	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. GilLead: Wurman	Arizona State University	Tempe, AZ
Mr. Peter Xaypraseuth	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Tung-Han You	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Serjik Zadourian	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Oct 04	16 Oct 04	Arizona State University—Tempe, AZ	0	350	0
30 Oct 04	31 Oct 04	Vandenberg Air Force Base— Vandenberg Air Force Base, CA	0	15000	0
08 Nov 04	12 Nov 04	American Astronomical Society/Division of Planetary Sciences—Louisville, KY	0	800	0
13 Nov 04	13 Nov 04	26th Annual American Indian Society for Engineering and Science National Conference— Anchorage, AK	0	1500	0
17 Nov 04	17 Nov 04	University of Arizona—Tucson, AZ	50	0	0
26 Nov 04	26 Nov 04	University of Arizona—Tucson, AZ	50	0	0
04 Dec 04	04 Dec 04	Long Beach Public Library—Long Beach, CA	0	30	0
11 Dec 04	11 Dec 04	University of Arizona—Tucson, AZ	285	0	0
08 Feb 05	08 Feb 05	Arizona State University—Tempe, AZ	0	225	0
10 Feb 05	10 Feb 05	Legacy Private Academy—Valencia, CA	124	0	0
11 Feb 05	11 Feb 05	Arizona State University—Tempe, AZ	0	61	0
18 Feb 05	18 Feb 05	California Institute of Technology (Caltech)— Pasadena, CA	200	0	0
22 Feb 05	23 Feb 05	Annandale Golf Course—Pasadena, CA	93	0	0
23 Feb 05	23 Feb 05	Planetary Sciences Institute—Laguna Niguel, CA	26	0	0
03 Mar 05	03 Mar 05	City Hall of Orlando—Orlando, FL	200	0	0
05 Mar 05	05 Mar 05	Phoenix Civic Plaza—Phoenix, AZ	240	0	0
15 Mar 05	19 Mar 05	Montana State University—Bozeman, MT	1088	2500	0
19 Mar 05	19 Mar 05	Phoenix Civic Plaza—Phoenix, AZ	45	0	0

19 Mar 05	20 Mar 05	NASA Glenn Research Center—Cleveland, OH	675	0	0
19 Mar 05	20 Mar 05	Sinte Gleska University—Mission, SD	500	0	0
22 Mar 05	23 Mar 05	Cornell University—Ithaca, NY	24	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	12000	0
01 Apr 05	01 Apr 05	Central Arizona Community College—Coolidge, AZ	35	0	0
02 Apr 05	02 Apr 05	University of Arizona—Tucson, AZ	32	0	0
09 Apr 05	09 Apr 05	Tucson Main Library—Tucson, AZ	52	0	0
19 Apr 05	19 Apr 05	Nogales High School—Nogales, AZ	0	400	0
22 Apr 05	22 Apr 05	University of Arizona—Tucson, AZ	54	0	0
26 Apr 05	26 Apr 05	McMahon's Steak House—Tucson, AZ	24	0	0
29 Apr 05	29 Apr 05	University of Arizona—Tucson, AZ	30	0	0
10 May 05	10 May 05	University of Wyoming—Laramie, WY	330	0	0
12 May 05	12 May 05	Phoenix Civic Plaza—Phoenix, AZ	875	0	0
12 May 05	13 May 05	Phoenix Convention Center—Phoenix, AZ	4300	0	0
18 May 05	18 May 05	Arizona State University—Tempe, AZ	28	0	0
26 May 05	26 May 05	Western Digital Corporation—Lake Forest, CA	175	0	0
26 May 05	26 May 05	Woodbridge Shopping Center—Irvine, CA	50	0	0
06 Jun 05	06 Jun 05	Rancho California Water District—Temecula, CA	36	0	0
22 Jun 05	23 Jun 05	University of British Columbia—Vancouver, Canada	0	100	0
06 Jul 05	06 Jul 05	California Institute of Technology (Caltech)—Pasadena, CA	41	0	0
11 Jul 05	11 Jul 05	International Council on Systems Engineering Conference—Rochester, NY	0	900	0
22 Jul 05	22 Jul 05	Interpack 2005 Conference—San Francisco, CA	50	0	0
30 Jul 05	30 Jul 05	Stargazers Inn and Observatory—Big Bear Lake, CA	156	0	0
08 Aug 05	08 Aug 05	NASA Kennedy Space Center—Kennedy Space Center, FL	65	0	0
18 Aug 05	18 Aug 05	Space Center Houston—Houston, TX	139	0	0
01 Sep 05	01 Sep 05	Deep Space Network—Madrid, Spain	50	0	0
06 Sep 05	06 Sep 05	Westlake Village Rotary Club—Westlake Village, CA	20	0	0
16 Sep 05	16 Sep 05	National Science Foundation—Arlington, VA	200	0	0
08 Nov 05	08 Nov 05	Geological Society of America Convention—Denver, CO	40	0	0

A418. Mars: Public Tours

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Tours of Mars-related facilities led by scientists, engineers, and other knowledgeable, NASA-affiliated experts.

Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov.

Phone: 818-354-8774.

Scientist(s):	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Mr. Todd Barber	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Mary Davis	Arizona State University	Tempe, AZ
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Ms. Stephanie Lear	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Paige Valderrama	Arizona State University	Tempe, AZ
	Mr. Keith Watt	Arizona State University	Tempe, AZ
	Mr. Gil Lead: Wurman	Arizona State University	Tempe, AZ
	Dr. Michael Wyatt	Arizona State University	Tempe, AZ
	Mr. Albert Yen	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Oct 04	19 Oct 04	Arizona State University—Tempe, AZ	16	0	0
19 Oct 04	19 Oct 04	Arizona State University—Tempe, AZ	31	0	0
01 Nov 04	01 Nov 04	Arizona State University—Tempe, AZ	45	0	0
02 Nov 04	02 Nov 04	Arizona State University—Tempe, AZ	14	0	0
02 Nov 04	02 Nov 04	Arizona State University—Tempe, AZ	37	0	0
04 Nov 04	04 Nov 04	Arizona State University—Tempe, AZ	5	0	0
04 Nov 04	04 Nov 04	Arizona State University—Tempe, AZ	59	0	0
05 Nov 04	05 Nov 04	Arizona State University—Tempe, AZ	12	0	0
14 Nov 04	14 Nov 04	Arizona State University—Tempe, AZ	47	0	0
18 Nov 04	18 Nov 04	Arizona State University—Tempe, AZ	23	0	0
19 Nov 04	19 Nov 04	Arizona State University—Tempe, AZ	156	0	0
24 Nov 04	24 Nov 04	Arizona State University—Tempe, AZ	14	0	0
01 Dec 04	01 Dec 04	Arizona State University—Tempe, AZ	61	0	0
02 Dec 04	02 Dec 04	Arizona State University—Tempe, AZ	41	0	0

03 Dec 04	03 Dec 04	Arizona State University—Tempe, AZ	8	0	0
03 Dec 04	03 Dec 04	Arizona State University—Tempe, AZ	40	0	0
09 Dec 04	09 Dec 04	Arizona State University—Tempe, AZ	65	0	0
05 Jan 05	05 Jan 05	Arizona State University—Tempe, AZ	13	0	0
07 Jan 05	07 Jan 05	Arizona State University—Tempe, AZ	13	0	0
01 Feb 05	01 Feb 05	Arizona State University—Tempe, AZ	133	0	0
03 Feb 05	03 Feb 05	Arizona State University—Tempe, AZ	41	0	0
04 Feb 05	04 Feb 05	Arizona State University—Tempe, AZ	50	0	0
07 Feb 05	07 Feb 05	Arizona State University—Tempe, AZ	26	0	0
11 Feb 05	11 Feb 05	Arizona State University—Tempe, AZ	30	0	0
14 Feb 05	14 Feb 05	Arizona State University—Tempe, AZ	18	0	0
15 Feb 05	15 Feb 05	Arizona State University—Tempe, AZ	33	0	0
15 Feb 05	15 Feb 05	Arizona State University—Tempe, AZ	164	0	0
16 Feb 05	16 Feb 05	Arizona State University—Tempe, AZ	25	0	0
17 Feb 05	17 Feb 05	Arizona State University—Tempe, AZ	37	0	0
21 Feb 05	21 Feb 05	Arizona State University—Tempe, AZ	65	0	0
23 Feb 05	23 Feb 05	Arizona State University—Tempe, AZ	34	0	0
02 Mar 05	02 Mar 05	Arizona State University—Tempe, AZ	39	0	0
02 Mar 05	02 Mar 05	Arizona State University—Tempe, AZ	157	0	0
03 Mar 05	03 Mar 05	Arizona State University—Tempe, AZ	33	0	0
07 Mar 05	07 Mar 05	Arizona State University—Tempe, AZ	31	0	0
08 Mar 05	08 Mar 05	Arizona State University—Tempe, AZ	12	0	0
08 Mar 05	08 Mar 05	Arizona State University—Tempe, AZ	32	0	0
11 Mar 05	11 Mar 05	Arizona State University—Tempe, AZ	57	0	0
14 Mar 05	14 Mar 05	Arizona State University—Tempe, AZ	3	0	0
16 Mar 05	16 Mar 05	Arizona State University—Tempe, AZ	17	0	0
19 Mar 05	19 Mar 05	Arizona State University—Tempe, AZ	41	0	0
25 Mar 05	25 Mar 05	Arizona State University—Tempe, AZ	33	0	0
30 Mar 05	30 Mar 05	Arizona State University—Tempe, AZ	65	0	0
11 Apr 05	11 Apr 05	Arizona State University—Tempe, AZ	52	0	0
15 Apr 05	15 Apr 05	Arizona State University—Tempe, AZ	33	0	0
21 Apr 05	21 Apr 05	Arizona State University—Tempe, AZ	34	0	0
25 Apr 05	25 Apr 05	Arizona State University—Tempe, AZ	58	0	0
28 Apr 05	28 Apr 05	Arizona State University—Tempe, AZ	147	0	0
29 Apr 05	29 Apr 05	Arizona State University—Tempe, AZ	136	0	0
02 May 05	02 May 05	Arizona State University—Tempe, AZ	53	0	0
03 May 05	03 May 05	Arizona State University—Tempe, AZ	38	0	0
03 May 05	03 May 05	Arizona State University—Tempe, AZ	54	0	0
04 May 05	04 May 05	Arizona State University—Tempe, AZ	58	0	0
05 May 05	05 May 05	Arizona State University—Tempe, AZ	24	0	0
05 May 05	05 May 05	NASA Johnson Space Center—Houston, TX	5	0	0
10 May 05	10 May 05	Arizona State University—Tempe, AZ	46	0	0
11 May 05	11 May 05	Arizona State University—Tempe, AZ	29	0	0
11 May 05	11 May 05	Arizona State University—Tempe, AZ	46	0	0
12 May 05	12 May 05	Arizona State University—Tempe, AZ	36	0	0
12 May 05	12 May 05	Arizona State University—Tempe, AZ	44	0	0
13 May 05	13 May 05	Arizona State University—Tempe, AZ	12	0	0
13 May 05	13 May 05	Arizona State University—Tempe, AZ	31	0	0
20 May 05	20 May 05	Arizona State University—Tempe, AZ	36	0	0
20 May 05	20 May 05	Arizona State University—Tempe, AZ	139	0	0
23 May 05	23 May 05	Arizona State University—Tempe, AZ	130	0	0
24 May 05	24 May 05	Arizona State University—Tempe, AZ	96	0	0
26 May 05	26 May 05	Arizona State University—Tempe, AZ	100	0	0
27 May 05	27 May 05	Arizona State University—Tempe, AZ	59	0	0
31 May 05	31 May 05	Arizona State University—Tempe, AZ	7	0	0
01 Jun 05	01 Jun 05	Arizona State University—Tempe, AZ	28	0	0
08 Jun 05	08 Jun 05	Arizona State University—Tempe, AZ	85	0	0
13 Jun 05	13 Jun 05	Arizona State University—Tempe, AZ	20	0	0
21 Jun 05	21 Jun 05	Arizona State University—Tempe, AZ	31	0	0
23 Jun 05	23 Jun 05	Arizona State University—Tempe, AZ	18	0	0
23 Jun 05	23 Jun 05	Arizona State University—Tempe, AZ	37	0	0
24 Jun 05	24 Jun 05	Arizona State University—Tempe, AZ	60	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	10	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	15	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	16	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	19	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	22	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	28	0	0

29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	35	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	93	0	0
29 Jun 05	29 Jun 05	Arizona State University—Tempe, AZ	141	0	0
30 Aug 05	30 Aug 05	NASA Johnson Space Center—Houston, TX	2	0	0

A419. Mars: Rock Around the World

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars scientists ask students from around the world to help them understand the Red Planet by sending in a rock from their region of the world. In return, undergraduate and graduate geology students take the spectra of each rock so students can see what their rock is made of. Each student gets a certificate of participation and an online cataloging of their rock and spectra.

Lead: Ms. Michelle Viotti, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: mviotti@pop.jpl.nasa.gov.
Phone: 818-354-8774.

Primary URL: <http://ratw.asu.edu/>

Scientist(s):	Mr. Grady Daub	Arizona State University	Tempe, AZ
	Mr. Christopher Edwards	Arizona State University	Tempe, AZ
	Mr. Jason Ki	Arizona State University	Tempe, AZ
	Ms. Laurie Rogers	Arizona State University	Tempe, AZ
	Ms. Teresa Rogers	Arizona State University	Tempe, AZ
	Mr. Kyle Scanlon	Arizona State University	Tempe, AZ
	Mr. Leondest Staley	Arizona State University	Tempe, AZ
Partner(s):	Arizona State University		Tempe, AZ

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Nov 04	30 Nov 04	Arizona State University—Tempe, AZ	1	0	0
01 Dec 04	31 Dec 04	Arizona State University—Tempe, AZ	1	0	0
01 Jan 05	31 Jan 05	Arizona State University—Tempe, AZ	0	62	0
01 Feb 05	28 Feb 05	Arizona State University—Tempe, AZ	0	59	0

A420. MESSENGER: National Meetings

Theme(s): Planetary

Msn/Prgm: MESSENGER[B109]

Description: Individuals from the team represent MESSENGER at national science and education conferences.

Lead: Ms. Stephanie Stockman, Science Systems and Applications, Inc., Lanham, MD 20706. Phone: 301-614-6457.

Scientist(s):	Dr. Mario Acuna	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. L. Evans	Worthington Elementary School	Worthington, KY

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
13 Dec 04	17 Dec 04	American Geophysical Union Annual Fall Meeting— San Francisco, CA	35	0	0
18 Aug 05	18 Aug 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	45	0

A421. Mid-Atlantic Planetarium Society (MAPS) Annual Conference

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ASO[B33], SSE[B34], SEU[B35], SECEF[B36], MARSSB[B39]

Description: The Space Science Support Network introduced members of the Mid-Atlantic Planetarium Society (MAPS) to services provided by the Science Mission Directorate (SMD) Broker/Facilitator program and other services available through the SMD forums.

Lead: Mr. Derek Pitts, Franklin Institute Science Museum, Philadelphia, PA 19103. E-mail: dpitts@fi.edu. Phone: 215-448-1200.

Primary URL: <http://marssb.cet.edu>

Secondary

URL: <http://www.maps-planetarium.org/>

Scientist(s):	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV
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Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
27 May 05	27 May 05	2005 Middle Atlantic Planetarium Society Conference—Philadelphia, PA	150	0	0

A422. New Horizons: Public Outreach

Theme(s): Heliophysics, Planetary

Msn/Prgm: New Horizons (Pluto-Kuiper Belt) Mission[B105]

Description: The New Horizons E/PO office helped scientists, engineers, and other team members become involved in the New Horizons E/PO efforts by providing opportunities for general public outreach and supplying the resources necessary for the team members to talk to the general public, provide demonstrations, and conduct activities related to the New Horizons mission.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.pluto.jhuapl.edu>

Secondary URL: <http://www.jhuapl.edu/>

Scientist(s): Dr. Fran Bagenal University of Colorado, Boulder Boulder, CO

Ms. Kerri Beisser Johns Hopkins University Applied Physics Laboratory Laurel, MD

Dr. Rick Binzel Massachusetts Institute of Technology Cambridge, MA

Mr. Mike Buckley Johns Hopkins University Applied Physics Laboratory Laurel, MD

Ms. Linda Butler Johns Hopkins University Applied Physics Laboratory Laurel, MD

Dr. Alexandra Cha Glenelg Country School Glenelg, MD

Dr. Yanping Guo Johns Hopkins University Applied Physics Laboratory Laurel, MD

Dr. Richard Maurer Johns Hopkins University Applied Physics Laboratory Laurel, MD

Dr. Jeffrey Moore NASA Ames Research Center Moffett Field, CA

Dr. S. Alan Stern Southwest Research Institute Boulder, CO

Mr. James Stratton Johns Hopkins University Applied Physics Laboratory Laurel, MD

Ms. Taunya Sweet U.S. Space and Rocket Center Huntsville, AL

Dr. Leslie Young Massachusetts Institute of Technology Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Oct 04	02 Oct 04	Long Island University—Brooklyn, NY	0	30	0
18 Feb 05	18 Feb 05	Maryland Science Center—Baltimore, MD	0	50	0
19 Feb 05	19 Feb 05	Unitarian Universalist Church of Las Cruces—Las Cruces, NM	0	200	0
15 Mar 05	15 Apr 05	Comcast Cable—Baltimore, MD	0	400000	0
17 Mar 05	17 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	20	0
23 Mar 05	23 Mar 05	National Institute of Aerospace—Hampton, VA	0	50	0
18 Apr 05	18 Apr 05	Museum of Idaho—Idaho Falls, ID	0	25	0
28 Apr 05	28 Apr 05	NASA Ames Research Center—Moffett Field, CA	0	200	0
11 May 05	11 May 05	KBRW Public Radio, 91.9 FM/Barrow—Barrow, AK	0	99999	0
27 May 05	27 May 05	Boeing Aerospace Corporation—Decatur, AL	0	15	0
02 Jun 05	02 Jun 05	Johns Hopkins University Applied Physics Laboratory—Laurel, MD	0	4	0
03 Jun 05	03 Jun 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	150	0
09 Jun 05	09 Jun 05	DeKalb County Library—Fort Payne, AL	0	340	0
18 Jul 05	18 Jul 05	Northern Maine Museum of Science—Presque Isle, ME	0	50	0
19 Jul 05	19 Jul 05	Turner Memorial Public Library—Presque Isle, ME	0	25	0

A423. New Horizons: Special Interest Groups and Scouts

Theme(s): Heliophysics, Planetary

Msn/Prgm: MRO[B102], New Horizons (Pluto-Kuiper Belt) Mission[B105], MESSENGER[B109], NEAR[B110]

Description: The E/PO office helped scientists, engineers, and other team members become involved in the New Horizons E/PO efforts by providing outreach opportunities in support of Boy and Girl Scouts, senior citizens, and various other special interest groups or organizations. The E/PO office supported these events by providing the resources necessary for the team members to talk to these groups, provide demonstrations, and conduct activities related to New Horizons and other NASA missions that the Johns Hopkins University Applied Physics Laboratory (JHU/APL) is supporting. These efforts include the senior citizen communities in order to provide opportunities to learn about the various missions in an effort to make the materials widely available and easily accessible to all age groups.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.
E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.

Primary URL: <http://www.pluto.jhuapl.edu>

Secondary

URL: <http://www.jhuapl.edu/>

Scientist(s): Dr. Fran Bagenal

University of Colorado, Boulder
Massachusetts Institute of Technology

Boulder, CO
Cambridge, MA

Dr. Andrew Cheng	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Ellen Cohen	NASA Headquarters	Washington, DC
Mr. Robert Dobyns	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Helen Hart	Space Telescope Science Institute	Baltimore, MD
Mr. James Kaidy, Sr.	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Ms. Dina Tady	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. John Troll	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
Mr. Scott Weidner	Southwest Research Institute	San Antonio, TX

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
19 Mar 05	19 Mar 05	Camp Ilchester—Ellicott City, MD	0	130	0
08 Apr 05	08 Apr 05	Seagrave Memorial Observatory—North Scituate, RI	0	60	0
20 Apr 05	20 Apr 05	Private residence—Marriottsville, MD	0	8	0
06 May 05	06 May 05	Camp Hashawa Environmental Center—Westminster, MD	0	100	0
07 Jul 05	07 Jul 05	Marriott Hunt Valley Inn—Hunt Valley, MD	0	1750	0
13 Jul 05	13 Jul 05	Bear Branch Nature Center—Westminster, MD	0	20	0
19 Jul 05	19 Jul 05	Hyatt Regency Austin—Austin, TX	0	150	0
17 Aug 05	17 Aug 05	Washington State Convention Center—Seattle, WA	0	4000	0
27 Aug 05	27 Aug 05	Fiske Planetarium—Boulder, CO	0	80	0
15 Sep 05	15 Sep 05	Howard County Department of Recreation and Parks—Columbia, MD	0	30	0

A424. RHESSI: Public Outreach and Informal Education

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: SECEF[B36], CHIPS[B54], Fast Auroral SnapshoT (FAST) Explorer[B74], RHESSI[B76], THEMIS[B79], STEREO[B88]

Description: Lectures were given about the RHESSI mission findings.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

Contact: Dr. Bryan Mendez, University of California, Berkeley, Berkeley, CA 94720. E-mail: bmendez@ssl.berkeley.edu. Phone: 510-643-2178.

Primary URL: http://cse.ssl.berkeley.edu/hessi_epo

Scientist(s):	Dr. Manfred Bester	University of California, Berkeley	Berkeley, CA
	Dr. John Bonnell	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Ms. Darlene Park	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA
	Mr. Igor Ruderman	University of California, Berkeley	Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
16 Apr 05	16 Apr 05	University of California, Berkeley—Berkeley, CA	0	80	0

A425. S2N2: Adult Education on Space Science

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: S2N2 participated in a panel at Cascadia Con, the major North American science fiction convention, because of our broad overview of NASA programs and because of the convention's location in Seattle. The same was true of helping NASA Headquarters with an exhibit at the National Council of State Legislatures meeting in Seattle. The third activity was more deliberate. In order to build capacity in space science E/PO, S2N2 offered a seminar for undergraduates at the University of Washington that would inform them about opportunities in this field and get them working directly in formal and informal education settings.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.

Scientist(s):	Dr. Donald Brownlee	University of Washington	Seattle, WA
	Dr. Julie Lutz	University of Washington	Seattle, WA
	Ms. Darlette Powell	University of Washington	Seattle, WA
	Dr. Toby Smith	University of Washington	Seattle, WA
	Dr. Robert Winglee	University of Washington	Seattle, WA
Partner(s):	Girl Scouts Totem Council		Seattle, WA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Jan 05	23 Mar 05	University of Washington—Seattle, WA	2	0	0
17 Aug 05	19 Aug 05	National Conference of State Legislatures—Seattle, WA	0	2500	0
03 Sep 05	03 Sep 05	Cascadia Con—Seattle, WA	0	30	0

A426. S2N2: Amateur Astronomy Partnerships

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: The goal of the S2N2 Amateur Astronomy Partnerships is to enhance the programs of amateur astronomy clubs and to broker appropriate partnerships for them to do public outreach and education. Most of our work involves suggesting space scientists to work with or speak to amateur groups, suggesting appropriate NASA space science materials and programs (such as the Night Sky Network) to enhance their efforts in E/PO, and helping them to find suitable partnerships and venues for events.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.

Primary URL: <http://www.s2n2.org>

Scientist(s): Dr. Rick Kang Pine Mountain Observatory Eugene, OR

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Feb 05	07 Feb 05	Eugene Astronomical Society—Eugene, OR	27	0	0
03 Mar 05	03 Mar 05	Heart of the Valley Astronomy Club—Corvallis, OR	15	0	0
18 May 05	18 May 05	Southern Oregon Skywatchers—Ashland, OR	19	0	0
01 Jun 05	01 Jun 05	Night Sky 45 Astronomy Club—Salem, OR	17	0	0

A427. S2N2: Public Events

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: S2N2 B/F[B43]

Description: The goal of the S2N2 Public Events program is to put the accomplishments of SMD missions and scientists before the public. The most frequent thing we do is to partner with space scientists and institutions that put on public events to have the scientists give lectures. This is particularly effective when we can take advantage of milestones such as the Cassini-Huygens mission successes and Deep Impact. However, we also take advantage of the calendars and needs of the institutions with whom we partner. For example, the Museum of the Rockies has an Astro Fair that is the perfect opportunity to showcase SMD accomplishments. At the University of Idaho, the College of Engineering was happy to showcase the Mars Rovers at their Engineering Design Exposition, which was held at the same time as a Lego Mars Rover Robotics event for sixth-graders.

Lead: Dr. Julie Lutz, University of Washington, Seattle, WA 98195-1310. E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.

Primary URL: <http://www.s2n2.org>

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
12 Oct 04	12 Nov 04	Institute for Astronomy—Hilo, HI	330	330	0
30 Nov 04	30 Nov 04	Z.J. Loussac Public Library—Anchorage, AK	50	50	0

Scientist(s):	Dr. David Atkinson	University of Idaho	Moscow, ID
	Dr. Steven Beckwith	Space Telescope Science Institute	Baltimore, MD
	Mr. David Bennewies	AstroFair	Bozeman, MT
	Dr. Gary Fujiwara	Institute for Astronomy	Hilo, HI
	Ms. Dee Hanson	Alaska Airmen's Association	Anchorage, AK
	Dr. Bob Joseph	Institute for Astronomy	Hilo, HI
	Ms. Mary Kadooka	Institute for Astronomy	Honolulu, HI
	Dr. Rick Kang	Pine Mountain Observatory	Eugene, OR
	Dr. David Levy	Institute for Astronomy	Hilo, HI
	Dr. Julie Lutz	University of Washington	Seattle, WA
	Dr. David McKenzie	Montana State University	Bozeman, MT
	Dr. Karen Meech	University of Hawaii at Manoa	Honolulu, HI
	Ms. Ivy Merriot	Abaetern Academy	Bozeman, MT
	Dr. Donna Minton	Montana NASA Space Grant	Bozeman, MT
	Dr. Ted Munsch	Alaska Pacific University	Anchorage, AK
	Ms. Theresa Neuding	Anchorage Town Square	Anchorage, AK
	Mr. Chris Peterson	University of Hawaii at Manoa	Honolulu, HI
	Ms. Darlette Powell	University of Washington	Seattle, WA
	Mr. John Pye	Maui Community College	Kaahumanu-Kahului, HI
	Dr. Travis Rector	University of Alaska, Anchorage	Anchorage, AK
	Dr. Norbert Schorghofer	Hawaii Institute of Geophysics and Planetology	Honolulu, HI
	Dr. Toby Smith	University of Washington	Seattle, WA
	Dr. Tamra Wear	Challenger Learning Center of Alaska	Kenai, AK
	Ms. Joan Yanagihara	University of Hawaii at Hilo	Hilo, HI

02 Dec 04	02 Dec 04	Hawaii Institute of Geophysics and Planetology—Honolulu, HI	60	0	0
14 Jan 05	31 Mar 05	Hawaii State Library—Honolulu, HI	0	800	0
26 Jan 05	26 Jan 05	University of Washington—Seattle, WA	0	200	0
11 Feb 05	11 Feb 05	Oaklea Middle School—Junction City, OR	10	0	0
26 Feb 05	26 Feb 05	AstroFair—Bozeman, MT	3	104	0
04 Mar 05	04 Mar 05	Iolani School—Honolulu, HI	253	0	0
15 Mar 05	15 Mar 05	Kapiolani Park—Honolulu, HI	36	0	0
20 Mar 05	20 Mar 05	Museum of the Rockies—Bozeman, MT	7	47	0
24 Mar 05	24 Mar 05	Spring Lake Village—Santa Rosa, CA	60	0	0
16 Apr 05	16 Apr 05	University of Washington—Seattle, WA	0	220	0
22 Apr 05	22 Apr 05	Scio Middle School—Scio, OR	173	0	0
22 Apr 05	22 Apr 05	University of Washington—Seattle, WA	0	33	0
26 Apr 05	26 Apr 05	University of Hawaii at Hilo—Hilo, HI	40	0	0
29 Apr 05	29 Apr 05	University of Idaho—Moscow, ID	1670	0	0
14 May 05	14 May 05	Alaska Airmen's Association—Anchorage, AK	0	800	0
17 Jun 05	17 Jun 05	Anchorage Town Square—Anchorage, AK	0	350	0
03 Jul 05	03 Jul 05	Maui Community College—Kaahumanu-Kahului, HI	0	350	0
03 Jul 05	03 Jul 05	University of Hawaii at Hilo—Hilo, HI	0	500	0
22 Sep 05	22 Sep 05	Institute for Astronomy—Hilo, HI	5	80	0

A428. "Shedding Light on Einstein"

Theme(s): Astrophysics

Msn/Prgm: HEASARC[B65]

Description: "Shedding Light on Einstein" is a presentation for the general public about the speed of light and its role in Einstein's theory of relativity. This talk provides an introduction to the scientific theories Einstein developed and their ties to other aspects of physics.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

Scientist(s): Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
12 Mar 05	12 Mar 05	Maryland Science Center—Baltimore, MD	0	14	0

A429. SOFIA: E/PO Conference Posters

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: Poster presentations at professional meetings displayed various aspects of the SOFIA E/PO program.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.Primary URL: <http://sofia.arc.nasa.gov/Edu/edu.html>

Scientist(s): Dr. Dana Backman NASA Ames Research Center Moffett Field, CA
 Ms. Edna DeVore Search for Extraterrestrial Intelligence Mountain View, CA
 (SETI) Institute

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
25 Apr 05	25 Apr 05	University of Rhode Island—Narragansett, RI	100	0	0

A430. SOFIA: Public Events

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: SOFIA participates with exhibit booths at open houses and other events to which the general public is invited.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035. E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.Primary URL: <http://www.sofia.usra.edu/Edu/edu.html>

Secondary

URL: <http://www.nasa.gov/centers/ames/news/index.html>

Scientist(s): Dr. Dana Backman NASA Ames Research Center Moffett Field, CA
 Ms. Darlene Mendoza Astronomical Society of the Pacific San Francisco, CA

Partner(s): Universities Space Research Association, Moffett Field, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Jul 05	16 Jul 05	NASA Ames Research Center—Moffett Field, CA	0	5000	0

A431. SOFIA: Tour of the SOFIA Science Mission Operations Center (SSMOC) and SOFIA Hangar

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]
 Description: A tour of Hangar N211 is given to interested classes from grades K–12 and students of undergraduate and graduate schools/universities. It begins in the E/PO conference room with an introduction of the SOFIA project and ends in the hangar where SOFIA will be parked.
 Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.
 E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.
 Scientist(s): Dr. Dana Backman NASA Ames Research Center Moffett Field, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
21 Oct 04	21 Oct 04	NASA Ames Research Center—Moffett Field, CA	6	0	0
12 May 05	12 May 05	NASA Ames Research Center—Moffett Field, CA	19	0	0
06 Jul 05	06 Jul 05	NASA Ames Research Center—Moffett Field, CA	41	0	0

A432. SOFIA: Tours of the Kuiper Airborne Observatory (KAO) Interior

Theme(s): Astrophysics
 Msn/Prgm: SOFIA[B53]
 Description: KAO is the predecessor of SOFIA. It had a 0.9-meter telescope on board a converted C-141 cargo jet and was operated by NASA out of the Ames Research Center and the Moffett Federal Airfield from 1975 until 1996. It is currently a museum piece and remains parked at NASA Ames Research Center.
 Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.
 E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.
 Scientist(s): Ms. Darlene Mendoza Astronomical Society of the Pacific San Francisco, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
27 Apr 05	30 Apr 05	AeroExpo V—Moffett Field, CA	0	3500	0

A433. Solar Terrestrial Probes: Classroom and Public Engagements

Theme(s): Heliophysics
 Msn/Prgm: STP/PO[B85]
 Description: The STP/LWS Public Engagement Program includes activities such as Sunspotters with topics like the electromagnetic spectrum, auroras, the observation of colors, and space weather. The Public Engagement activities usually have a certain thematic or geographic focus and often target particular groups. Through public engagement, the general public can be encouraged to become personally involved in NASA's research and discoveries.
 Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.
 Primary URL: <http://lws.gsfc.nasa.gov>

Secondary URL: <http://stp.gsfc.nasa.gov>

Scientist(s): Ms. Sara Brown NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Donald Carson NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Gilberto Colon NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Omar Eaton NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Art Poland George Mason University Fairfax, VA
 Ms. Florence Tan NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Mitchell Watkins NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
05 Jan 05	15 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	1525	0	0

A434. Solar Terrestrial Probes: Educational Programs and Workshops

Theme(s): Heliophysics
 Msn/Prgm: STP/PO[B85]
 Description: The STP/LWS EPO team conducts workshops and activities at conferences, community outreach programs, parks, planetariums, and informal education sites.
 Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

Primary URL: <http://stp.gsfc.nasa.gov>

Secondary URL: <http://lws.gsfc.nasa.gov>

Scientist(s): Mr. Omar Eaton NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Evelina Felicite-Maurice NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Laura Ratta NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Mitchell Watkins NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	1000	0

A435. Solar Terrestrial Probes: Planetarium, Science Center, and Museum Outreach

Theme(s): Heliophysics
 Msn/Prgm: STP/PO[B85]
 Description: The STP/LWS Program Informal Education component conducts solar activities at museums, planetariums, observatories, and community centers across the country.
 Lead: Dr. Evelina Felicite-Maurice, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: efelicite@pop400.gsfc.nasa.gov. Phone: 301-286-6949.
 Primary URL: <http://stp.gsfc.nasa.gov>
 Secondary URL: <http://lws.gsfc.nasa.gov>
 Scientist(s): Mr. Omar Eaton NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Evelina Felicite-Maurice NASA Goddard Space Flight Center Greenbelt, MD
 Ms. Laura Ratta NASA Goddard Space Flight Center Greenbelt, MD
 Mr. Mitchell Watkins NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
05 Jan 05	15 Sep 05	Green Bank National Radio Astronomy Observatory—Green Bank, WV	0	1304	0

A436. Space Science Education at Public Events in New England

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: NESSIE B/F[B40]
 Description: Public gatherings related to science and technology afford valuable opportunities for communicating the excitement of space science and the resources associated with the NASA E/PO Support Network. This sort of outreach is the equivalent of casting a shallow but very broad net. In the past year, NESSIE staff personally engaged thousands of teachers, students, parents, and children at events including Space Day at Framingham State College; Astronomy Day in Brookline, MA; and Educator's Night in Boston, MA. Some of these events were reported under other NESSIE-facilitated activities such as Public Presentations by New England Space Scientists.
 Lead: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: cclemens@mos.org. Phone: 617-589-0227.
 Contact: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
 E-mail: cclemens@mos.org. Phone: 617-589-0227.
 Primary URL: <http://www.mos.org/hessie>
 Scientist(s): Ms. Karen Spence Museum of Science Boston, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
16 Apr 05	16 Apr 05	Dexter and Southfield Schools—Brookline, MA	763	0	0
05 May 05	05 May 05	Boys & Girls Clubs—Lawrence, MA— Lawrence, MA	56	0	0

A437. Space Telescope Science Institute: Open Night

Theme(s): Astrophysics
 Msn/Prgm: HST[B49]
 Description: The Space Telescope Science Institute (STScI) offers a lecture to the general public every first Tuesday of the month. Each month, the general public can learn about a variety of cosmic topics such as the Hubble Space Telescope's (HST) greatest discoveries or the latest science results from the telescope. These lectures are delivered by an HST scientist. Attendees also receive HST lithographs and/or posters related to the evening's topic.
 Lead: Dr. Ian Griffin, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: griffin@stsci.edu.
 Phone: 410-338-4567.
 Primary URL: http://hubblesite.org/about_us/open-night.shtml
 Scientist(s): Dr. Ron Allen Space Telescope Science Institute Baltimore, MD
 Dr. Roelof de Jong Space Telescope Science Institute Baltimore, MD
 Dr. Harry Ferguson Space Telescope Science Institute Baltimore, MD
 Ms. Elizabeth Kessler University of Chicago Chicago, IL
 Dr. Mario Livio Space Telescope Science Institute Baltimore, MD
 Dr. Dave Soderblom Space Telescope Science Institute Baltimore, MD
 Dr. Massimo Stiavelli Space Telescope Science Institute Baltimore, MD
 Dr. Frank Summers Space Telescope Science Institute Baltimore, MD
 Mr. Ray Villard Space Telescope Science Institute Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
05 Oct 04	05 Oct 04	Space Telescope Science Institute— Baltimore, MD	0	75	0
07 Dec 04	07 Dec 04	Space Telescope Science Institute— Baltimore, MD	0	75	0
04 Jan 05	04 Jan 05	Space Telescope Science Institute— Baltimore, MD	0	80	0
01 Feb 05	01 Feb 05	Space Telescope Science Institute— Baltimore, MD	0	80	0
01 Mar 05	01 Mar 05	Space Telescope Science Institute— Baltimore, MD	0	135	199
05 Apr 05	05 Apr 05	Space Telescope Science Institute— Baltimore, MD	0	140	3624
03 May 05	03 May 05	Space Telescope Science Institute— Baltimore, MD	0	90	692
07 Jun 05	07 Jun 05	Space Telescope Science Institute— Baltimore, MD	0	80	0
05 Jul 05	05 Jul 05	Space Telescope Science Institute— Baltimore, MD	0	90	0

A438. Spitzer Space Telescope Conference Support

Theme(s): Astrophysics

Msn/Prgm: SST[B52]

Description: We report here the conferences at which the Spitzer Space Telescope had a booth, a presentation, or other specific presence.

Lead: Dr. Michelle Thaller, California Institute of Technology (Caltech), Pasadena, CA 91125.

E-mail: thaller@ipac.caltech.edu. Phone: 626-395-8670.

Primary URL: <http://www.aas.org/>

Scientist(s):	Ms. Doris Daou	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Robert Hurt	California Institute of Technology (Caltech)	Pasadena, CA
	Dr. Michelle Thaller	California Institute of Technology (Caltech)	Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting— San Diego, CA	2012	0	0

A439. Sun-Earth Connection Education Forum (SECEF): Informal and Public Outreach

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36]

Description: SECEF staff members support the efforts of science centers, museums, and planetariums by providing them with images, activities, programs, and scientific presentations. Mission scientists share the science of their missions with the general public and educators through specific programs developed by a science center. The missions also provide images and animated features to support programs developed by the science centers specifically for educators and for the general public.

Lead: Ms. Karen Meyer, University of California, Berkeley, Berkeley, CA 94720. E-mail: karena@ssl.berkeley.edu. Phone: 510-642-4185.

Contact: Mr. Lou Mayo, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: louis.a.mayo.1@gsfc.nasa.gov. Phone: 301-286-0165.

Primary URL: <http://sunearth.gsfc.nasa.gov>

Secondary

URL: <http://sunearth.ssl.berkeley.edu>

Scientist(s):	Dr. Manfred Bester	University of California, Berkeley	Berkeley, CA
	Dr. John Bonnell	University of California, Berkeley	Berkeley, CA
	Dr. Anna Butterworth	University of California, Berkeley	Berkeley, CA
	Dr. Nahide Craig	University of California, Berkeley	Berkeley, CA
	Ms. Emilie Drobnes	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Renee Frappier	University of California, Berkeley	Berkeley, CA
	Dr. Leonard Garcia	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Karin Hauck	University of California, Berkeley	Berkeley, CA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Ms. Karen Meyer	University of California, Berkeley	Berkeley, CA
	Ms. Carolyn Ng	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Ms. Darlene Park	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA
	Mr. Igor Ruderman	University of California, Berkeley	Berkeley, CA
	Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA

Dr. James Thieman
Mr. Andrew Westphal
Ms. Jackie Wong

NASA Goddard Space Flight Center
University of California, Berkeley
University of California, Berkeley

Greenbelt, MD
Berkeley, CA
Berkeley, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
24 Feb 05	24 Feb 05	Allendale Elementary School—Oakland, CA	117	0	0
18 Mar 05	18 Mar 05	Emanuele (Guy Junior) Elementary School— Union City, CA	62	0	0
20 Mar 05	20 Mar 05	Exploratorium—San Francisco, CA	0	300	0
07 Apr 05	07 Apr 05	Sobran Park Elementary School—Oakland, CA	118	0	0
16 Apr 05	16 Apr 05	University of California, Berkeley—Berkeley, CA	150	600	0
20 Apr 05	20 Apr 05	Bancroft Elementary School—Walnut Creek, CA	118	0	0
28 Apr 05	28 Apr 05	Robert Louis Stevenson Elementary School— San Francisco, CA	208	0	0
29 Apr 05	29 Apr 05	Six Flags America—Largo, MD	5200	0	0
12 May 05	12 May 05	Saklan Valley School—Moraga, CA	133	0	0
18 May 05	18 May 05	Markham Elementary School—Oakland, CA	118	0	0
01 Jun 05	01 Jun 05	Lincoln Elementary School—Oakland, CA	109	0	0
21 Jun 05	23 Jun 05	Yosemite National Park— Yosemite National Park, CA	25	0	0
20 Jul 05	20 Jul 05	Rock Creek Park Nature Center and Planetarium— Washington, DC	16	0	0
20 Jul 05	20 Jul 05	University of California, Berkeley—Berkeley, CA	27	0	0

A440. Sun-Earth Day-Ancient Observatories-Timeless Knowledge

Theme(s): Heliophysics, Planetary

Msn/Prgm: ASO[B33], SSE[B34], SEU[B35], SECEF[B36], CXO[B44], Kepler[B50], Swift[B57], Navigator Program[B59], HEASARC[B65], Voyager[B72], ACE[B73], Fast Auroral SnapshoT (FAST) Explorer[B74], IMAGE[B75], RHESSI[B76], THEMIS[B79], TRACE[B80], Polar[B82], Wind[B83], SOHO[B84], Solar-B[B87], TIMED[B89], JPL SSE[B96], MESSENGER[B109]

Description: Traditionally, Sun-Earth Day occurs annually on or near the spring equinox. However, throughout the year, there are many related events and activities such as Webcasts and Local Happenings that highlight the current Sun-Earth Day theme. Over the past 6 years, NASA's Sun-Earth Connection Education Forum has sponsored and coordinated education and public outreach events to highlight NASA's Sun-Earth Connection research and discoveries. Our strategy involves using celestial events, such as total solar eclipses and the Transit of Venus, as well as Sun-Earth Day during the March Equinox, to engage K–12 students and the general public in space science activities, demonstrations, and interactions with space scientists. Our goal is that participants of our program will benefit from the following key understandings: The Sun is a dynamic, magnetic star that affects Earth and other planets in our solar system; understanding the mysteries of the Sun has been a primary motivator for Sun watchers over time; human beings use technology (past, present, and future) to understand the Sun and the universe beyond; light has always provided a means of investigating the universe; and human beings from diverse cultures have viewed the Sun as the source of life.

Lead: Ms. Elaine Lewis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: lewis@mail630.gsfc.nasa.gov. Phone: 301-286-3337.

Contact: Mr. Troy Cline, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: cline@mail630.gsfc.nasa.gov. Phone: 301-286-6606.

Primary URL: <http://sunearthday.nasa.gov>

Scientist(s):	Ms. Andrea Angrum	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Troy Cline	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Renee Frappier	University of California, Berkeley	Berkeley, CA
	Ms. Karin Hauck	University of California, Berkeley	Berkeley, CA
	Dr. Isabel Hawkins	University of California, Berkeley	Berkeley, CA
	Ms. Elaine Lewis	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Julie Lutz	University of Washington	Seattle, WA
	Dr. Bryan Mendez	University of California, Berkeley	Berkeley, CA
	Dr. Carolyn Narasimhan	DePaul University	Chicago, IL
	Ms. Carolyn Ng	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Sten Odenwald	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Ruth Paglierani	University of California, Berkeley	Berkeley, CA
	Dr. Laura Peticolas	University of California, Berkeley	Berkeley, CA
	Mr. Igor Ruderman	University of California, Berkeley	Berkeley, CA
	Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA
	Dr. James Thieman	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Jackie Wong	University of California, Berkeley	Berkeley, CA
Partner(s):	Adler Planetarium and Astronomy Museum		Chicago, IL
	Arizona Science Center		Phoenix, AZ
	Bassett Planetarium		Amherst, MA
	Bishop Museum		Honolulu, HI

Carnegie Science Center	Pittsburgh, PA
Chabot Space and Science Center	Oakland, CA
Challenger Learning Center of Alaska	Kenai, AK
Christa McAuliffe Planetarium	Concord, NH
Coca-Cola Space Science Center	Columbus, GA
Denver Museum of Nature and Science	Denver, CO
Dreyfus Planetarium	Newark, NJ
Exploratorium	San Francisco, CA
Fernbank Science Center	Atlanta, GA
Franklin Institute Science Museum	Philadelphia, PA
Green Bank National Radio Astronomy Observatory	Green Bank, WV
H.B. Owens Planetarium	Lanham, MD
Houston Museum of Natural Science	Houston, TX
Howard University	Washington, DC
Imaginarium Science Discovery Center	Anchorage, AK
Japanese Planetarium	Tokyo, Japan
LodeStar Astronomy Center	Albuquerque, NM
Louisiana Art and Science Museum	Baton Rouge, LA
Maryland Science Center	Baltimore, MD
Muncie Community School District	Muncie, IN
Museum of Natural History and Planetarium	Providence, RI
Museum of Science	Boston, MA
Science Center of Connecticut	West Hartford, CT
Science Central	Fort Wayne, IN
Smithsonian National Air and Space Museum (NASM)	Washington, DC
South Florida Science Museum	West Palm Beach, FL
Space Center Houston	Houston, TX
University of Florida	Gainesville, FL

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
23 Oct 04	23 Oct 04	NASA Explorer Schools—Washington, DC	3720	0	0
29 Oct 04	31 Oct 04	Association for the Education of Teachers of Science—Yuma, AZ	30	0	0
21 Dec 04	21 Dec 04	Exploratorium—San Francisco, CA	0	12	40000
21 Dec 04	21 Dec 04	Exploratorium—San Francisco, CA	1550	93000	50000
21 Dec 04	21 Dec 04	Imaginarium Science Discovery Center—Anchorage, AK	0	300	0
01 Jan 05	21 Mar 05	NASA Ames Research Center—Moffett Field, CA	0	60	0
01 Jan 05	21 Mar 05	NASA Ames Research Center—Moffett Field, CA	0	120	0
01 Jan 05	30 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	44550	0
01 Jan 05	08 Apr 05	Louisiana Art and Science Museum—Baton Rouge, LA	0	1800	0
01 Jan 05	22 Apr 05	Challenger Learning Center—Kansas City, MO	0	1520	0
26 Jan 05	28 Jan 05	North Carolina Agricultural and Technical State University—Greensboro, NC	25	0	0
16 Feb 05	21 Feb 05	NASA Johnson Space Center—Houston, TX	620	0	0
17 Feb 05	22 Apr 05	NASA Stennis Space Center—Stennis Space Center, MS	160	0	0
26 Feb 05	26 Feb 05	University of Washington—Seattle, WA	14	0	0
04 Mar 05	04 Mar 05	Integrating Strategies and Technology in Education Practice (InSTEP)—Wheeling, WV	20	0	0
11 Mar 05	11 Mar 05	NASA Kennedy Space Center—Kennedy Space Center, FL	100	0	0
12 Mar 05	12 Mar 05	NASA Goddard Space Flight Center—Greenbelt, MD	20	0	0
12 Mar 05	13 Mar 05	Arizona Science Center—Phoenix, AZ	0	300	0
20 Mar 05	20 Mar 05	American Museum of Natural History—New York, NY	0	2000	0
20 Mar 05	20 Mar 05	Buffalo Museum of Science—Buffalo, NY	0	300	0
20 Mar 05	20 Mar 05	Chabot Space and Science Center—Oakland, CA	0	780	0
20 Mar 05	20 Mar 05	Denver Museum of Nature and Science—Denver, CO	0	2600	0
20 Mar 05	20 Mar 05	DePaul University—Chicago, IL	120	0	0
20 Mar 05	20 Mar 05	Exploratorium—San Francisco, CA	0	3181	0
20 Mar 05	20 Mar 05	Fort Worth Museum of Science and History—Fort Worth, TX	0	275	0
20 Mar 05	20 Mar 05	Girl Scout Troop 106—Inman, SC	0	200	0

20 Mar 05	20 Mar 05	Kalamazoo Valley Museum—Kalamazoo, MI	0	273	0
20 Mar 05	20 Mar 05	Lawrence Hall of Science—Berkeley, CA	0	50	0
20 Mar 05	20 Mar 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	100	0
20 Mar 05	20 Mar 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	120200	700000
20 Mar 05	20 Mar 05	Universum, Science Museum Zona Cultural de Ciudad—Mexico City, Mexico	0	450	0
20 Mar 05	21 Mar 05	Adler Planetarium and Astronomy Museum— Chicago, IL	0	1100	0
20 Mar 05	21 Mar 05	Astronomical League—Alexandria, VA	205	35000	0
20 Mar 05	21 Mar 05	Mid-Atlantic Region Space Science Broker (MARSSB)—Wheeling, WV	160	0	0
20 Mar 05	21 Mar 05	NASA Johnson Space Center—Houston, TX	0	60	0
20 Mar 05	21 Mar 05	NASA Langley Research Center—Hampton, VA	0	200000	0
20 Mar 05	21 Mar 05	NASA Marshall Space Flight Center— Marshall Space Flight Center, AL	0	90	0
21 Mar 05	21 Mar 05	Howard University—Washington, DC	10	0	0
21 Mar 05	21 Mar 05	NASA Ames Research Center—Moffett Field, CA	60	0	0
21 Mar 05	21 Mar 05	NASA Langley Research Center—Hampton, VA	0	435	0
21 Mar 05	21 Mar 05	Pennsylvania State University— University Park, PA	198	140	0
21 Mar 05	22 Apr 05	NASA Kennedy Space Center— Kennedy Space Center, FL	0	300	0
21 Mar 05	22 Apr 05	NASA Marshall Space Flight Center— Marshall Space Flight Center, AL	0	100	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	40	0	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	72	0	0
06 Apr 05	06 Apr 05	Northern Michigan University—Marquette, MI	25	0	0
06 Apr 05	09 Apr 05	Council for Exceptional Children Convention & Expo—Baltimore, MD	50	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	45	0	0
21 Sep 05	21 Sep 05	Minneapolis Planetarium—Minneapolis, MN	0	300	0

A441. Swift Gamma Ray Burst Mission: Public Presentations

Theme(s): Astrophysics

Msn/Prm: Swift[B57]

Description: Swift Gamma Ray Burst mission scientists, Educator Ambassadors, and E/PO professionals make presentations for the public highlighting the scientific goals of the Swift mission and explaining the instruments on board the satellite. Gamma-ray bursts, black holes, and distant galaxies are common themes in the presentations.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
Phone: 707-664-2655.

Primary URL: <http://swift.sonoma.edu>

Secondary URL: <http://swift.sonoma.edu/public.html>

Scientist(s):	Mr. Thomas Arnold	State College High School	State College, PA
	Dr. Lynn Cominsky	Sonoma State University	Rohnert Park, CA
	Dr. Neil Gehrels	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. David Morris	Pennsylvania State University	University Park, PA
	Mr. J. Myers	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Angela Phelps	Pennsylvania Space Grant Consortium	University Park, PA
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
07 Nov 04	21 Nov 04	Australian Museum, The—Sydney, Australia	30	310	0
02 Apr 05	02 Apr 05	Pennsylvania State University— University Park, PA	0	2000	0
07 Apr 05	07 Apr 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	100	0
11 Jun 05	11 Jun 05	KUSF Radio, 90.3 FM/San Francisco— San Francisco, CA	0	17000	0
12 Aug 05	12 Aug 05	NASA Goddard Space Flight Center— Greenbelt, MD	1	0	0

A442. TIMED: Public Outreach

Theme(s): Heliophysics, Planetary

Msn/Prgm: TIMED[B89]

Description: The TIMED E/PO office helped scientists, engineers, and other team members become involved in the TIMED E/PO efforts by providing opportunities for general public outreach. The E/PO office supported these events by providing the resources necessary for the team members to talk to the general public, provide handouts and demonstrations, and conduct activities related to the TIMED mission.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

Contact: Ms. Linda Butler, Johns Hopkins University Applied Physics Laboratory, Laurel, MD 20723-6099.

E-mail: Linda.Butler@jhuapl.edu. Phone: 240-228-5746.Primary URL: <http://www.timed.jhuapl.edu/>

Scientist(s): Ms. Emily CoBabe-Ammann University of Colorado, Boulder Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Fiske Planetarium—Boulder, CO	0	210	0

A443. TRACE: Image Distribution to the Public

Theme(s): Heliophysics

Msn/Prgm: TRACE[B80]

Description: The TRACE mission receives biweekly requests for images from a variety of sources ranging from magazines to book publishers to people just interested in the amazing images that TRACE produces. The images are exciting and dynamic for the public to see.

Contact: Ms. Dawn Myers, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: dcm@zuni.nascom.nasa.gov. Phone: 301-286-5283.Primary URL: <http://vestige.lmsal.com/TRACE>

Secondary

URL: <http://vestige.lmsal.com/TRACE/POD/TRACEpod.html>

Scientist(s): Ms. Zoe Frank Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Dr. Karel Schryver Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Partner(s): Lockheed Martin Solar and Astrophysics Laboratory Palo Alto, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Lockheed Martin Solar and Astrophysics Laboratory—Palo Alto, CA	0	3150	1057428

A444. Ulysses: Jet Propulsion Laboratory Open House

Theme(s): Heliophysics

Msn/Prgm: Ulysses[B71], Voyager[B72]

Description: The Ulysses project participates in the Annual Jet Propulsion Laboratory Open House for the general public. The event is held over 2 days with an average of 25, 000 people in attendance. The interested public spend the day touring the various JPL mission- and technology-driven facilities. Mission fact sheets, milestones, activity wallsheets, and educational bookmarks are distributed throughout the weekend event.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.

Scientist(s): Ms. Andrea Angrum, NASA Jet Propulsion Laboratory Pasadena, CA

A445. Voyager: Public Outreach

Theme(s): Heliophysics

Msn/Prgm: Ulysses[B71], Voyager[B72]

Description: The Voyager science team supports general public media relations by participating in one-on-one interviews and panel discussions as well as supplying video explanations. Local civic organizations also request Voyager speakers for special audiences.

Lead: Ms. Maura Rountree-Brown, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Maura.Rountree-Brown@jpl.nasa.gov. Phone: 818-393-4897.

Contact: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.

Scientist(s): Ms. Andrea Angrum NASA Jet Propulsion Laboratory Pasadena, CA

Mr. Tim Hogle NASA Jet Propulsion Laboratory Pasadena, CA

Mr. Drew Koning American Museum of Natural History New York, NY

Dr. Stamatios Krimigis Johns Hopkins University Applied Physics Laboratory Laurel, MD

Dr. Edward Stone California Institute of Technology (Caltech) Pasadena, CA

Partner(s): NASA Goddard Space Flight Center Greenbelt, MD
NASA Headquarters Washington, DC

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
12 Jan 05	09 Feb 05	American Museum of Natural History— New York, NY	70	0	0
24 May 05	24 May 05	American Geophysical Union—Washington, DC	0	2000000	0
24 May 05	24 May 05	KABC-TV, Channel 7/Glendale—Glendale, CA	0	346000	0
24 May 05	24 May 05	KABC-TV, Channel 7/Glendale—Glendale, CA	0	4000000	0
24 May 05	24 May 05	KNBC-TV, Channel 4/Burbank—Burbank, CA	0	4000000	0
14 Jun 05	14 Jun 05	American Association of Retired Persons (AARP)— Washington, DC	0	10000	0
09 Sep 05	09 Sep 05	Chapman University—Orange, CA	0	250	0
09 Sep 05	09 Sep 05	Rotary Club—Pasadena, CA	150	0	0

A446. Wilkinson Microwave Anisotropy Probe (WMAP): Informal Outreach-MAPping the Cosmic Microwave Background

Theme(s): Astrophysics

Msn/Prgm: WMAP[B58]

Description: WMAP supported the Universe Forum in various activities, including Inside Einstein's Universe (a community of informal institutions celebrating Einstein's body of work on the centennial of its publication) and convention activities.

Contact: Ms. Lindsay Bartolone, Adler Planetarium and Astronomy Museum, Chicago, IL 60605.
E-mail: clark@astro.princeton.edu. Phone: 312-322-0316.

Primary URL: <http://map.gsfc.nasa.gov>

Secondary

URL: <http://www.astro.princeton.edu/~clark/teachersguide.html>

Scientist(s):	Mr. Sean Greenwalt	Sonoma State University	Rohnert Park, CA
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	0	1234	0

A447. XMM-Newton: High-Energy Public Presentations

Theme(s): Astrophysics

Msn/Prgm: XMM[B69]

Description: XMM-Newton public presentations include those given at planetariums and museums, as well as public lectures that discuss the results from this mission.

Lead: Dr. Lynn Cominsky, Sonoma State University, Rohnert Park, CA 94928. E-mail: lynnc@charmian.sonoma.edu.
Phone: 707-664-2655.

Primary URL: <http://xmm.sonoma.edu/>

Secondary

URL: <http://xmm.sonoma.edu/program.html>

Scientist(s):	Mr. Tom Estill	Chabot Space and Science Center	Oakland, CA
	Mr. J. Myers	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Philip Plait	Sonoma State University	Rohnert Park, CA
	Ms. Sarah Silva	Sonoma State University	Rohnert Park, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
13 Nov 04	21 Nov 04	Chabot Space and Science Center— Oakland, CA	300	0	0

Outreach Resources

A448. Air Expo for the Public

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: SOFIA cohosts public air shows throughout the country, especially at NASA Ames Research Center. Attendees include tourists, families, individuals, and air show employees and contractors. We exhibit the SOFIA model airplane, demonstrate infrared light using an infrared camera, and distribute SOFIA literature.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.
E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

Primary URL: <http://education.arc.nasa.gov>

Scientist(s):	Dr. Dana Backman	NASA Ames Research Center	Moffett Field, CA
	Ms. Becky Brondos	NASA Ames Research Center	Moffett Field, CA
	Mr. Ulrich Lampater	Universities Space Research Association	Moffett Field, CA
	Ms. Darlene Mendoza	Astronomical Society of the Pacific	San Francisco, CA

Ms. Merle Simbe
Mr. Eric Wang

NASA Ames Research Center
Universities Space Research Association

Moffett Field, CA
Moffett Field, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
02 Oct 04	03 Oct 04	California International Airshow—Salinas, CA	0	8000	0
26 Jul 05	28 Jul 05	Experimental Aircraft Association Oshkosh Air Show—Oshkosh, WI	0	300	0

A449. Aqua: Web Site

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: The Aqua Web site's aim is to inform the interested public about the Aqua mission and its results. The Web site includes overviews of the Aqua mission, instruments, science, science teams, and data products. It also includes highlighted Aqua images and Description:s of them, plus PowerPoint presentations and various brochures and other written materials for downloading. The site includes links to a series of Webcasts dedicated to the science and engineering of the Aqua mission and to Web sites devoted to the individual science teams and to the Aqua data.

Lead: Dr. Claire Parkinson, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: claire.l.parkinson@nasa.gov. Phone: 301-614-5715.

Contact: Mr. Steven Graham, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: steven.m.graham.2@gsfc.nasa.gov. Phone: 301-614-5561.

Primary URL: <http://aqua.nasa.gov>

A450. "Ask a Physicist"

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: SRT[B28], ACE[B73]

Description: Through this service, students and the public may ask relevant questions of physicists via e-mail. This is part of the Cosmicopia Web site. Questions and answers are added to the site.

Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

Primary URL: <http://helios.gsfc.nasa.gov/physicist.html>

Scientist(s):	Ms. Beth Barbier	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Georgia DeNolfo	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Randy Jokipii	University of Arizona	Tucson, AZ
	Dr. Eberhard Moebius	University of New Hampshire	Durham, NH
	Mr. Lauren Scott	Washington University	St. Louis, MO
	Dr. Charles Smith	University of New Hampshire	Durham, NH
	Dr. Ed Tedesco	University of New Hampshire	Durham, NH
Partner(s):	California Institute of Technology (Caltech)		Pasadena, CA
	Los Alamos National Laboratory		Los Alamos, NM
	Washington University		St. Louis, MO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	0	1000000

A451. "Ask an Astrophysicist"

Theme(s): Astrophysics

Msn/Prgm: SRT[B28], Constellation-X[B46], HEASARC[B65], Suzaku[B68], ACE[B73]

Description: The Imagine the Universe "Ask an Astrophysicist" service gives Web site visitors an opportunity to have their questions answered by a team of scientists. The questions are reviewed, answered, and posted to a public database.

Lead: Dr. Koji Mukai, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: mukai@milkyway.gsfc.nasa.gov. Phone: 301-286-9447.

Primary URL: http://imagine.gsfc.nasa.gov/docs/ask_astro/ask_an_astronomer.html

Scientist(s):	Mr. Michael Arida	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Beth Barbier	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Kevin Boyce	NASA Goddard Space Flight Center	Greenbelt, MD
	Mr. Jay Cummings	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Georgia DeNolfo	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Amy Fredericks	Massachusetts Institute of Technology	Cambridge, MA
	Dr. Ilana Harrus	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Ann Hornschemeir	Johns Hopkins University	Baltimore, MD
	Mr. Stefan Immler	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Hans Krimm	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Jeff Livas	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Michael Loewenstein	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Barbara Mattson	NASA Goddard Space Flight Center	Greenbelt, MD

Partner(s):	Mr. Koji Mukai	NASA Goddard Space Flight Center	Greenbelt, MD		
	Mr. Scott Owens	NASA Goddard Space Flight Center	Greenbelt, MD		
	Ms. Veronica Ponce	NASA Goddard Space Flight Center	Greenbelt, MD		
	Massachusetts Institute of Technology		Cambridge, MA		
Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	2000000

A452. "Astronomy at 41,000 Feet-The Story of SOFIA"

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: "Astronomy at 41,000 Feet-The Story of SOFIA" is a presentation for the general public about the SOFIA program. In early 2005, the largest airborne telescope ever built will begin making astronomical observations. The SOFIA telescope has a primary mirror with a diameter of 2.5 meters (nearly 100 inches) and will view the universe from an open cavity built into a modified Boeing 747-SP. From an altitude of 41,000 feet, SOFIA will make astronomical observations up to 150 nights per year that are impossible for any other telescope, whether on a mountaintop or in space. The presentation covers the nature of infrared radiation; why astronomers want to study the infrared energy that many objects in space emit; why these studies need to be conducted from a high-flying aircraft; the engineering feat of modifying a 747 to carry a 100-inch telescope; and the story behind the technology that allows astronomers to overcome the effect of the aircraft's slipstream and vibrations to, as one astronomer put it, "use a telescope in an earthquake during a hurricane." A special version of the same presentation is pitched to amateur astronomers, encouraging them to do public outreach for SOFIA and other NASA missions.

Lead: Mr. Michael Bennett, Astronomical Society of the Pacific, San Francisco, CA 94112.

E-mail: mbennett@astrosociety.org. Phone: 415-337-1100.

Primary URL: http://sofia.arc.nasa.gov/Edu/calendar/edu_calendar.html

Scientist(s):	Dr. Dana Backman	NASA Ames Research Center	Moffett Field, CA
	Ms. Alicia Baturoni	Space Education Initiatives	Green Bay, WI
	Dr. Eric Becklin	NASA Ames Research Center	Moffett Field, CA
	Mr. Michael Bennett	Astronomical Society of the Pacific	San Francisco, CA
	Mr. Al Harper	NASA Space Science Center at DePaul University	Chicago, IL
	Ms. Shelleen Lomas	NASA Ames Research Center	Moffett Field, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
14 Oct 04	17 Oct 04	California Science Teachers Association Conference—San Jose, CA	9	0	0
16 Oct 04	16 Oct 04	Yerkes Observatory, University of Chicago— Williams Bay, WI	0	40	0
19 Oct 04	19 Oct 04	NASA Ames Research Center—Moffett Field, CA	10	0	0
04 Feb 05	04 Feb 05	College of San Mateo—San Mateo, CA	4	40	0
23 Feb 05	23 Feb 05	California State University, Hayward— Hayward, CA	46	0	0
11 Mar 05	11 Mar 05	NASA Ames Research Center—Moffett Field, CA	33	0	0
06 Jul 05	06 Jul 05	NASA Ames Research Center—Moffett Field, CA	11	0	0
26 Jul 05	28 Jul 05	Experimental Aircraft Association Oshkosh Air Show—Oshkosh, WI	0	26	0
10 Aug 05	10 Aug 05	NASA Ames Research Center—Moffett Field, CA	20	0	0
12 Aug 05	13 Aug 05	2005 Astronomical League National Conference— Overland Park, KS	0	185	0
16 Sep 05	16 Sep 05	Ventura County Astronomical Society— Simi Valley, CA	46	0	0
21 Sep 05	21 Sep 05	University of Arizona—Tucson, AZ	63	0	0

A453. Atmospheric Infrared Sounder (AIRS): Public Web Site

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: The AIRS public Web site's aim is to inform the public about the AIRS instrument, as well as the Aqua mission and its results. The Web site contains access points to the AIRS data and supporting documentation, feature articles, visualizations, image galleries, and papers. The Web site provides an overview of the AIRS mission and often provides imagery from AIRS of current weather events.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

Primary URL: <http://airs.jpl.nasa.gov>

A454. Atmospheric Infrared Sounder (AIRS): Automated Daily Weather Maps

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: Near-real-time weather maps of the continental United States are automatically generated and posted on the AIRS public Web site. An agreement with NOAA (which has direct downlink access) was arranged to get quick access to direct downlink data from the AIRS instrument. The automated process grabs the data, creates weather maps, and posts them online. Current maps include surface skin temperature, temperature at 700 mb, and precipitable water.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

Primary URL: <http://airs.jpl.nasa.gov>

A455. Atmospheric Infrared Sounder (AIRS): Earth Science Music Video

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: The Atmospheric Infrared Sounder (AIRS) is featured in a music video about NASA Jet Propulsion Laboratory (JPL) Earth science remote sensing missions. The video was produced and edited by AIRS outreach coordinator Sharon Okonek. Originally created for the NASA JPL Open House, it has been shown for other NASA JPL events. It was updated for 2005.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

A456. Atmospheric Infrared Sounder (AIRS): Quarterly Newsletter

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: This publication features stories and news that pertain to the AIRS instrument and Aqua mission.

Lead: Ms. Sharon Okonek, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: sharon.okonek@jpl.nasa.gov. Phone: 818-354-9483.

Primary URL: <http://airs.jpl.nasa.gov>

A457. "Beginnings: Stars, Planets, and Life"

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: A learning module, "Beginnings: Stars, Planets, and Life," will be developed to be presented at Vanderbilt University's historic Dyer Observatory. The module will be constructed for use with students and adults of all ages and will be aligned with science education standards. It will include presentations by the PI and other authorities in space science and life science, along with hands-on activities that utilize the historic and modern telescopes of the observatory. The module will be presented in four outreach venues, all based at the observatory: summer camps for students, with special camps for girls and minorities; teacher workshops for Tennessee teachers; public nights at the observatory; and videoconferencing presentations with metropolitan schools and others.

Contact: Dr. Charles Chappell, Vanderbilt University, Nashville, TN 37235. E-mail: rick.chappell@vanderbilt.edu.
Phone: 615-373-4897.

A458. Cassini: "Ring World" Planetarium Showings

Theme(s): Planetary

Msn/Prgm: Cassini-Huygens Probe[B94]

Description: To tell the story of the international Cassini-Huygens mission to Saturn and Titan, a team led by NASA's Jet Propulsion Laboratory has produced a planetarium show called Ring World. Ring World was written by; Dr. Bill Gutsch, former head of the Hayden Planetarium, and produced by Brian Sullivan of Salt Lake City, UT. Ring World was released in 2004 to planetariums across the United States and internationally.

Lead: Ms. Jane Houston Jones, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
E-mail: Jane.H.Jones@jpl.nasa.gov. Phone: 818-393-6435.

Primary URL: <http://saturn.jpl.nasa.gov/museums/index.cfm>

Secondary URL: <http://saturn.jpl.nasa.gov/home/index.cfm>

Scientist(s): Ms. Jane Houston Jones NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Apr 05	30 Jun 05	NASA Jet Propulsion Laboratory—Pasadena, CA	12150	10000	0

A459. Chandra X-ray Center: Online Education and Outreach

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: The Chandra X-ray Center maintains a comprehensive public Web site providing access to the general public, educators, students, amateur astronomers, and special interest groups. The Web site presents all Chandra images that have been released publicly to date, background and contextual information about cosmic x-ray sources, an updated archive of answers to questions that were submitted through "Ask an Astrophysicist," downloadable classroom-ready materials and resources, a program that provides simplified access and structured guidance for educator use of Chandra data sets and analysis tools, and special features such as the Chandra Chronicles and the Chandra Digest. Updates are automatically made to the main NASA and

Smithsonian Institution portals. The Chandra public Web site is in full compliance with standards for accessibility in section 508 of the Americans with Disabilities Act and meets 100 percent of the Web Access Initiative Conformance A, Priority 1, guidelines for the World Wide Web Consortium. The site also contains rating labels for family-friendly surfing. PSigate, the Physical Science Information Gateway, "a free on-line catalog of high quality Internet resources in the physical sciences," continues to add links to the Chandra public Web site. Various statistics of site use are maintained. While unique IP addresses give a severe undercount due to firewalls, the site reports average monthly "visits" of approximately 180,000. Hits to the Web site average over 9 million per month.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.
Contact: Ms. Kimberly Kowal, Chandra X-ray Center, Cambridge, MA 02138. E-mail: kkowal@cfa.harvard.edu.
Phone: 617-496-7860.
Primary URL: <http://chandra.harvard.edu>

A460. Chandra X-ray Center: Operation Control Center Tours

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: The Chandra X-ray Center conducts tours of the Chandra Operations Control Center for education and public groups; these tours include audience- or age-appropriate presentations about the Chandra mission and science, along with a discussion (or actual demonstration) of satellite operations. Tours are frequently carried out in collaboration with the Chandra Project at the Massachusetts Institute of Technology. Tours can be requested by sending an e-mail message to the Chandra Public Outreach Group at cxcedu

Lead: Mr. Bruce Roberts, Chandra X-ray Center, Cambridge, MA 02138. E-mail: broberts@cfa.harvard.edu. Phone: 617-496-7089.

Contact: Mr. Bruce Roberts, Chandra X-ray Center, Cambridge, MA 02138. E-mail: broberts@cfa.harvard.edu. Phone: 617-496-7089.

Scientist(s): Mr. Bruce Roberts Harvard-Smithsonian Center for Astrophysics Cambridge, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Jan 05	28 Jan 05	Chandra X-ray Center—Cambridge, MA	18	0	0
22 Apr 05	23 Apr 05	Chandra X-ray Center—Cambridge, MA	24	0	0
22 May 05	22 May 05	Chandra X-ray Center—Cambridge, MA	2	0	0

A461. Chandra X-ray Center: Public Outreach

Theme(s): Astrophysics

Msn/Prgm: CXO[B44]

Description: Chandra X-ray Center staff and scientists, working with Chandra observations, present talks and distribute materials (such as posters and CDs) to diverse public groups to inform the general public and special interest groups about the status of the Chandra mission and the latest exciting scientific results. Talks are illustrated with multimedia presentations. Outreach materials are provided at no extra cost and in sufficient quantity to supply audience needs: over 60,000 lithographs, posters, and CD-ROMs were distributed this year. All printed and multimedia materials contain addresses and Web sites where the public can obtain further information. A large-size classroom wall poster on stellar evolution was included as an insert in the National Science Teachers Association magazine's astronomy-themed issue and distributed to 30,000 subscribers. The poster was accompanied by an article and card set utilizing Chandra and other space science content.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

Contact: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.
E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

Primary URL: <http://chandra.harvard.edu>

Secondary

URL: <http://science.nasa.gov>

Scientist(s):	Dr. Martin Elvis	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Guiseppina Fabbiano	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Mr. Gary Glick	Tufts University	Medford, MA
	Ms. Jan Malle	Point Park College	Pittsburgh, PA
	Dr. John Miller	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Patrick Slane	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Harvey Tananbaum	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Dr. Jan Vrtilek	Harvard University	Cambridge, MA
	Ms. Donna Young	Tufts University	Medford, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
10 Dec 04	10 Dec 04	Morrison Planetarium—San Francisco, CA	0	150	0
14 Dec 04	14 Dec 04	St. Peter's School—Cambridge, MA	68	0	0
28 Jan 05	28 Jan 05	Inter-Universities Center for Astronomy and Astrophysics—Pune, India	0	80	0

28 Jan 05	28 Jan 05	Inter-Universities Center for Astronomy and Astrophysics—Pune, India	30	20	0
02 Mar 05	02 Mar 05	Weymouth High School—Weymouth, MA	75	0	0
09 Mar 05	09 Mar 05	Grand Valley State University—Allendale, MI	112	0	0
16 Mar 05	16 Mar 05	Weymouth High School—Weymouth, MA	75	0	0
28 May 05	29 May 05	Juan de Fuca Festival of the Arts—Port Angeles, WA	0	35	0
28 May 05	29 May 05	Juan de Fuca Festival of the Arts—Port Angeles, WA	0	37	0
28 May 05	29 May 05	Juan de Fuca Festival of the Arts—Port Angeles, WA	0	45	0

A462. Community Workshops—Topics in Space Science Education

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SCORE[B38]

Description: The South-Central Organization of Researchers and Educators (SCORE) Program supports conferences that bring together communities of researchers, educators, and other appropriate professionals to address some of the issues in space science education. Examples of workshops include “Learning from the Frontier: Getting Planetary Data in the Hands of Educators” and “Before the First Day of School: Pre-Service Teacher Preparation and the Role of the Earth and Space Science Community.” These 1- or several-day workshops are intended to initiate and facilitate discussions as well as longer term networks and partnerships among researchers and educators.

Lead: Dr. Stephanie Shipp, Lunar and Planetary Institute, Houston, TX 77058–1113. E-mail: shipp@lpi.usra.edu. Phone: 281-486-2109.

Primary URL: <http://www.lpi.usra.edu/education/score/>

Scientist(s):	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Dr. Larry Cooper	NASA Headquarters Science Mission Directorate	Washington, DC
	Dr. LuAnne Dahlman	TERC	Cambridge, MA
	Dr. Adriane Dorrington	NASA Langley Research Center	Hampton, VA
	Ms. Amy Ellwein	University of New Mexico	Albuquerque, NM
	Dr. Virginia Gulick	NASA Ames Research Center	Moffett Field, CA
	Dr. Eric Hooper	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Dr. Marilyn Lindstrom	NASA Johnson Space Center	Houston, TX
	Ms. Leslie Lowes	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Dan Neafus	Denver Museum of Nature and Science	Denver, CO
	Dr. Matt Nymann	University of New Mexico	Albuquerque, NM
	Dr. Jessica Robin	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV
	Dr. Greg Schultz	University of California, Berkeley	Berkeley, CA
	Dr. Timothy Slater	University of Arizona	Tucson, AZ
	Dr. Denise Smith	Space Telescope Science Institute	Baltimore, MD
	Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Carolyn Sumners	Houston Museum of Natural Science	Houston, TX
	Dr. William Waller	Tufts University	Medford, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
13 Dec 04	17 Dec 04	American Geophysical Union Annual Fall Meeting—San Francisco, CA	15	100	0
14 Mar 05	18 Mar 05	36th Lunar and Planetary Science Conference—League City, TX	88	0	0
01 Aug 05	01 Aug 05	NASA Jet Propulsion Laboratory—Pasadena, CA	32	0	0

A463. Deep Impact: Web Site

Theme(s): Planetary

Msn/Prgm: Deep Impact[B108]

Description: The Deep Impact mission's primary goal for the Web site is to inform and educate the general public and make materials for the mission available for anyone to download and use. Objectives for the site include producing and adding educational activities, current news and data from the mission, games, and personal perspectives to the site on a monthly basis. There was also a Small Telescope Science Program (STSP) site to which amateur astronomers posted their observations of Tempel 1 in 2001 and during encounter. The Deep Impact Web site had an unprecedented amount of traffic during the encounter with Tempel 1. Traffic to the Web site and its associated sites had increased over the year prior to encounter. The mission became more visible to the public in January with its launch and maintained an increasing amount of traffic as we approached encounter. An e-newsletter called Deep News on the site had between 14, 000 and 16, 000 readers each month, and the mission added new personal stories, articles, and educational activities on a monthly basis. Deep Impact also has a NASA portal Web site. The Deep Impact site has a mirror at the University of Maryland and at the STSP site to which amateur astronomers submitted their data from observations of Tempel 1 both in 2001 and during

this last year. The Deep Impact mission and the Bill Haley's Comets (The Comets) were combined in the public's mind as a postencounter celebration. The Comets' manager combined historic and current footage of the singing group with Deep Impact animation and encounter images to design a visual montage to "Rock Around the Clock." Sony gave special permission for the music video to play online via the JPL, Deep Impact, and Deep Impact NASA portal sites for a limited period of time. The mission celebration was combined with the celebration of the 50th anniversary of the ascension of Rock Around the Clock to number 1 on the music charts.

Contact: Ms. Maura Rountree-Brown, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Maura.Rountree-Brown@jpl.nasa.gov. Phone: 818-393-4897.

Primary URL: <http://deepimpact.jpl.nasa.gov>

Secondary

URL: <http://deepimpact.umd.edu>

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	Space Place Web site—Pasadena, CA	0	1500	0

A464. Discovery Program Office: Miscellaneous

Theme(s): Planetary

Msn/Prgm: DPSO[B106]

Description: The Discovery Program supports a variety of formal and informal education activities with presentations, demonstrations, and hands-on activities.

Lead: Ms. Shari Asplund, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: shari.e.asplund@jpl.nasa.gov. Phone: 818-354-7280.

Scientist(s):	Ms. Shari Asplund	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Art Hammon	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Todd May	NASA Marshall Space Flight Center	Marshall Space Flight Center, AL
	Ms. Shannon McConnell	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Maura Rountree-Brown	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Anita Sohus	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Dec 04	08 Dec 04	Loreto Elementary School—Los Angeles, CA	30	0	0
28 Jun 05	30 Jun 05	Mauna Kea Astronomy Education Center—Hilo, HI	40	0	0
03 Jul 05	03 Jul 05	University of Hawaii at Hilo—Hilo, HI	0	500	0

A465. "Earth as Parks" Online Exhibit

Theme(s): Earth Science

Msn/Prgm: LDCM[B5]

Description: Earth as Parks is an interpretive/informal education project being conducted by NASA, the U.S. Geological Survey, and the National Park Service. The project will result in an interactive, personally engaging Web-based exhibit for each of two parks: Acadia and Shenandoah. Place-based historical themes will be used to convey the parks' messages and the value of using remote sensing and modern mapping techniques, particularly for examining land use/land cover change through time. Each exhibit will consist of text, maps, aerial photography, satellite imagery, and images of park artifacts. By linking remote sensing and modern mapping technology to park experiences, we expect to reach new audiences with messages about the value and importance of the use of such technology. Applications of remote sensing for understanding park resource issues will be emphasized. Visitors to the exhibit will be encouraged to explore topics on their own and will be given opportunities to link to appropriate Web sites for further information. We intend to use Web design that encourages people to explore some aspects of remote sensing and mapping on their own (for instance, a chance for users to toggle through different band combinations of a Landsat scene).

Lead: Ms. Anita Davis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. Phone: 301-614-6669.

Primary URL: <http://landsat.gsfc.nasa.gov>

Secondary

URL: <http://ldcm.gsfc.nasa.gov>

A466. "Earth Observatory" Web Site

Theme(s): Earth Science

Msn/Prgm: "Earth Observatory"[B11]

Description: The Earth Observatory is a Web-based Earth science magazine that provides the public with NASA satellite imagery and scientific information. The foci are climate and environmental change (including natural hazards) and the use of space-based sensors for research and commercial applications in Earth science. The primary target audience is the science-attentive public (roughly 20 million Americans identify themselves in national surveys as being well-informed about, attentive to, and motivated to seek information on science topics). The site also features content targeted to other audiences: teachers, students, scientists, and media professionals. The Earth Observatory has been endorsed by Scientific American, Popular Science, TERC, NSTA, the U.S. Global Change Research Program (USGCRP), and the Environmental Protection Agency (EPA).

Lead: Mr. David Herring, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: david.d.herring@nasa.gov. Phone: 202-358-5703.

Primary URL: <http://earthobservatory.nasa.gov/>

Secondary

URL: <http://visibleearth.nasa.gov/>

Partner(s): NASA Ames Research Center
NASA Goddard Institute for Space Studies
NASA Johnson Space Center,
NASA Langley Research Center
U.S. Department of Agriculture (USDA) Foreign Agricultural Service

Moffett Field, CA
New York, NY
Houston, TX
Hampton, VA
Washington, DC

A467. Education and Public Outreach to Rural Areas

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SRT[B28]

Description: The intent of the program is to provide education and outreach opportunities for students and the general public in northeast and north-central Kansas. This will be accomplished by (1) creating a portable, self-contained system for presenting astronomy and science information via a laptop computer and projector, as well as an 8-inch LX-200 telescope and (2) creating an outreach/public education center at Farpoint Observatory. All of the outreach activities will be coordinated and conducted by amateur astronomers from the Northeast Kansas Amateur Astronomers' League Inc. (NEKAAL) and provided free of charge to schools and communities in the area. The involvement of amateur astronomers brings the passion for astronomy of "regular people" to schools and the general public in an area where access to science has been largely unavailable.

Lead: Dr. Gary Hug, Northeast Kansas Amateur Astronomers' League, Topeka, KS 66601.

E-mail: frogstar@intergate.com. Phone: 785-863-7828.

Primary URL: <http://www.nekaal.org>

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
10 Oct 04	10 Oct 04	Riley Dark Sky Site—Riley, KS	0	18	0
19 Oct 04	19 Oct 04	First Lutheran Church—Topeka, KS	0	65	0
01 Nov 04	01 Nov 04	Salina South High School—Salina, KS	110	0	0
05 Nov 04	05 Nov 04	Farpoint Observatory—Eskridge, KS	18	0	0
12 Nov 04	12 Nov 04	Theodore Roosevelt Elementary School— Manhattan, KS	148	0	0
20 Nov 04	20 Nov 04	Fairlawn Heights Wesleyan Church—Topeka, KS	0	30	0
25 Feb 05	25 Feb 05	Mission Valley Elementary/Middle School— Eskridge, KS	35	0	0
10 Mar 05	10 Mar 05	Mission Valley Elementary/Middle School— Eskridge, KS	30	0	0
25 Apr 05	25 Apr 05	Junction City High School—Junction City, KS	58	0	0
06 May 05	06 May 05	Farpoint Observatory—Eskridge, KS	9	0	0
06 May 05	06 May 05	Farpoint Observatory—Eskridge, KS	116	0	0
06 May 05	06 May 05	Theodore Roosevelt Elementary School— Manhattan, KS	116	0	0
26 Jun 05	26 Jun 05	Farpoint Observatory—Eskridge, KS	5	0	0
26 Aug 05	26 Aug 05	Farpoint Observatory—Eskridge, KS	0	13	0
03 Sep 05	03 Sep 05	Red River Astronomy Club Observatory— Nashville, AR	0	30	0

A468. Expanding Your Horizons: Outreach to Girls in Science

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SECEF[B36], SSI B/F[B42], S2N2 B/F[B43], NAI[B62]

Description: Expanding Your Horizons (EYH) is a series of annual conferences coordinated by the Math/Science Network for middle school, junior high, and high school girls to increase their interest in taking math, science, and technology classes in order to prepare for more career options. Conferences are held in over 89 locations nationwide, often in rural areas that do not get much exposure to space science. This conference is the only EYH conference held in Utah; it reaches 700-1,000+ girls and 200-400 teachers and parents. This March, Erica Ellingson provided a presentation called Searching for the Invisible to faculty, staff, students, and concurrent enrollment students (and interested community members) on cosmology and dark matter: humbling surprises cosmology has given us in the past few years in terms of what we now know we don't know and personal experiences with space science. Cheri Morrow gave a presentation on the latest results of Saturn exploration and two 1-hour workshops on kinesthetic astronomy. Together, Morrow and Ellingson gave the keynote presentation, entitled Girls and Galaxies. A star party was sponsored by the Utah Valley State College (UVSC) Astronomy and Physics Department and the Clark Planetarium, Salt Lake City (connection brokered by SSI Broker). Amy Wilkerson staffed a booth with resources and information on careers with NASA. Cheri Morrow and Erica Ellingson participated in a day of special preconference events to include boys and girls.

Lead: Ms. Amy Wilkerson, Space Science Institute, Boulder, CO 80301. E-mail: awilkerson@colorado.edu.

Phone: 720-974-5833.

Primary URL: <http://uvsc.edu/conted/equity/horizons.html>

Scientist(s): Dr. Erica Ellingson University of Colorado, Boulder Boulder, CO
 Dr. Cherilynn Morrow Space Science Institute Boulder, CO
 Partner(s): Clark Planetarium Salt Lake City, UT
 Expanding Your Horizons Orem, UT
 NASA Ames Research Center Moffett Field, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
10 Mar 05	12 Mar 05	Utah's Expanding Your Horizons (EYH) Conference—Orem, UT	533	1250	0

A469. Featured Scientist Article for "Imagine the Universe!" Web Site

Theme(s): Astrophysics
 Msn/Prgm: HEASARC[B65]
 Description: The Imagine the Universe team interviews scientists from the NASA GSFC Exploration of the Universe Division (EUD) and posts online articles about their career interests, background, and hobbies. This series of articles profiles an array of EUD team members. In FY05, articles focused on; Dr. Jean Cottam and; Dr. Jennifer Scott.
 Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.
 E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.
 Primary URL: http://imagine/docs/features/bios/archive_bios.html
 Scientist(s): Ms. Beth Barbier NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Jean Cottam NASA Goddard Space Flight Center Greenbelt, MD
 Dr. James Lochner NASA Goddard Space Flight Center Greenbelt, MD
 Dr. Jennifer Scott Space Telescope Science Institute Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	0	2000000

A470. Girl Scouts of the USA (GSUSA)-NASA Collaboration

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SSE[B34]
 Description: This program is an ongoing partnership between NASA and the Girl Scouts of the USA (GSUSA). It started as a relationship between NASA JPL and GSUSA (Memorandum of Understanding signed in 2003) but has now become a formal partnership with NASA as a whole (new Memorandum to be signed by the NASA Administrator). GSUSA has a membership of almost four million girls (ages 5-17) and adults. This gives us the opportunity to reach the underrepresented, girls and women, with established, successful, time-proven delivery methods. Our synergistic goals are to (1) raise the comprehension and interest of girls and women in science-related topics and (2) encourage girls and women to pursue careers in science, technology, engineering, and mathematics (STEM). We do this by (1) professional development for adult members, (2) program experiences for girls, (3) communication to encourage participation in the program, and (4) program evaluation.

Lead: Ms. Rosalie Bettrue, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.
 E-mail: Rosalie.Bettrue@jpl.nasa.gov. Phone: 818-393-5388.

Scientist(s):	Dr. Carlton Allen	University of Arizona	Tucson, AZ
	Dr. Carlton C. Allen	NASA Johnson Space Center	Houston, TX
	Ms. Jaclyn Allen	Lockheed Martin Corporation	Houston, TX
	Ms. Heidi Becker	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Rosalie Bettrue	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Matt Bobrowsky	Space Telescope Science Institute	Baltimore, MD
	Dr. Mary Bothwell	Kittridge Elementary School	Van Nuys, CA
	Ms. Tiffany Chiu	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Troy Cline	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Pamela Conrad	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Nagin Cox	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Eric DeJong	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Linda del Castillo	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Sharon Dew	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Andrea Donnellan	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jaime Dyk	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Emily Eelkema	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Charles Elachi	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Ann Marie Eldering	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Nayla Fernandes	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Kay Ferrari	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Gary Fujihara	Institute for Astronomy	Hilo, HI
	Ms. Page Garcia	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Edward Gonzales	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jennifer Grier	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA

Dr. Paula Grunthaner	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Cecilia Guiar	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Art Hammon	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Gay Hill	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Ayanna Howard	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Sheri Klug	Arizona State University	Tempe, AZ
Ms. Elizabeth Lamassoure	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Arlene Levine	NASA Langley Research Center	Hampton, VA
Ms. Elaine Lewis	NASA Goddard Space Flight Center	Greenbelt, MD
Dr. Rosaly Lopes	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Leslie Lowes	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Julie Lutz	University of Washington	Seattle, WA
Mr. Louis Mayo	NASA Goddard Space Flight Center	Greenbelt, MD
Dr. Ellis Miner	NASA Jet Propulsion Laboratory	Pasadena, CA
Mr. Knut Oxnyvad	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Heather Parsons	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Annie Richardson	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Maura Rountree-Brown	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. Cassandra Runyon	College of Charleston	Charleston, SC
Dr. Denise Smith	Space Telescope Science Institute	Baltimore, MD
Ms. Stephanie Stockman	NASA Goddard Space Flight Center	Greenbelt, MD
Dr. Ashley Stroupe	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Jenny Tieu	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
Ms. Julie Townsend	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA
Dr. William Whitney	NASA Jet Propulsion Laboratory	Pasadena, CA
Ms. Karen Yuen	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
23 Oct 04	23 Oct 04	University of California, Riverside—Riverside, CA	1064	0	0
30 Oct 04	30 Oct 04	Westport Mennonite Brethren Church— Collinsville, OK	159	0	0
07 Dec 04	12 Dec 04	Girl Scout Edith Macy Conference Center— Briarcliff, NY	27	0	0
25 Jun 05	25 Jun 05	Mid-Pacific Institute—Honolulu, HI	30	0	0
28 Jun 05	04 Jul 05	University of Hawaii at Hilo—Hilo, HI	20	0	0
17 Sep 05	17 Sep 05	Sahuaro Girl Scout Council—Tucson, AZ	18	0	0

A471. High-Energy Astrophysics Exhibit at GSFC Visitor Center

Theme(s):	Astrophysics				
Msn/Prgm:	HEASARC[B65], Suzaku[B68], ACE[B73]				
Description:	The Exploration of the Universe display at the NASA Goddard Visitor Center includes two panels focused on NASA high-energy astrophysics science, a panel on recent science news, and an interactive multimedia display. Visitors have the opportunity to browse the Imagine the Universe! Web site and other features.				
Lead:	Ms. Karen Smale, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: Karen.M.Smale.1@gsfc.nasa.gov . Phone: 301-286-7612.				
Primary URL:	http://lhea.gsfc.nasa.gov/docs/news/vc.html				
Scientist(s):	Mr. Michael Arida	NASA Goddard Space Flight Center		Greenbelt, MD	
	Ms. Beth Barbier	NASA Goddard Space Flight Center		Greenbelt, MD	
	Ms. Meredith Bene	NASA Goddard Space Flight Center		Greenbelt, MD	
	Ms. Karen Smale	NASA Goddard Space Flight Center		Greenbelt, MD	

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	10000	0

A472. Hubble Space Telescope: Workshops and Presentations

Theme(s):	Astrophysics				
Msn/Prgm:	HST[B49]				
Description:	Space Telescope Science Institute (STScI) staff are invited to conduct presentations and workshops locally, nationally, and internationally. The knowledge and expertise of STScI staff make them a natural choice to speak at science and education professional associations, universities and colleges, K–12 educational institutions, science centers, museums, planetariums, and general public venues about the Hubble Space Telescope (HST).				
Lead:	Ms. Bonnie Eisenhamer, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: bonnie@stsci.edu . Phone: 410-338-4798.				
Scientist(s):	Ms. Lucy Albert	Space Telescope Science Institute		Baltimore, MD	
	Dr. Dana Backman	NASA Ames Research Center		Moffett Field, CA	

Ms. Lynn Barranger	Space Telescope Science Institute	Baltimore, MD
Dr. David Bersier	Space Telescope Science Institute	Baltimore, MD
Mr. Brett Blacker	Space Telescope Science Institute	Baltimore, MD
Dr. Matt Bobrowsky	Space Telescope Science Institute	Baltimore, MD
Mr. John Boia	Space Telescope Science Institute	Baltimore, MD
Ms. Heather Bradbury	Space Telescope Science Institute	Baltimore, MD
Ms. Laura Bucklew	Space Telescope Science Institute	Baltimore, MD
Ms. Kerry Clark	Space Telescope Science Institute	Baltimore, MD
Dr. Nahide Craig	University of California, Berkeley	Berkeley, CA
Mr. Tim Druckrey	Maryland Institute College of Art	Baltimore, MD
Ms. Bonnie Eisenhamer	Space Telescope Science Institute	Baltimore, MD
Mr. Jonathan Eisenhamer	Space Telescope Science Institute	Baltimore, MD
Ms. Lori Feaga	Johns Hopkins University	Baltimore, MD
Ms. Leslie Foor	Space Telescope Science Institute	Baltimore, MD
Dr. William Forman	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Ms. Lisa Frattare	Space Telescope Science Institute	Baltimore, MD
Dr. Alan Gould	Lawrence Hall of Science	Berkeley, CA
Ms. Cheryl Gundy	Space Telescope Science Institute	Baltimore, MD
Ms. Pamela Harman	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
Ms. Inge Heyer	Space Telescope Science Institute	Baltimore, MD
Ms. Meredith Higbie	Lunar and Planetary Institute	Houston, TX
Mr. Mark Katz	Peabody Institute of Music	Baltimore, MD
Ms. Linda Knisely	Space Telescope Science Institute	Baltimore, MD
Mr. Mark Kochte	Space Telescope Science Institute	Baltimore, MD
Dr. Anita Krishnamurthi	NASA Headquarters	Washington, DC
Dr. Mario Livio	Space Telescope Science Institute	Baltimore, MD
Dr. Julie Lutz	University of Washington	Seattle, WA
Mr. Juan Madrid	Space Telescope Science Institute	Baltimore, MD
Mr. James Manning	Space Telescope Science Institute	Baltimore, MD
Mr. Dan McCallister	Space Telescope Science Institute	Baltimore, MD
Dr. Melissa McGrath	Space Telescope Science Institute	Baltimore, MD
Dr. Flavio Mendez	Maryland Science Center	Baltimore, MD
Dr. Cherilynn Morrow	Space Science Institute	Boulder, CO
Ms. Carole Rest	Space Telescope Science Institute	Baltimore, MD
Mr. Tony Roman	Space Telescope Science Institute	Baltimore, MD
Dr. Barry Rothberg	Space Telescope Science Institute	Baltimore, MD
Dr. Phil Sakimoto	University of Notre Dame	Notre Dame, IN
Dr. Denise Smith	Space Telescope Science Institute	Baltimore, MD
Mr. Marc Steiner	WYPR Radio, 88.1 FM/Baltimore	Baltimore, MD
Mr. John Stoke	Space Telescope Science Institute	Baltimore, MD
Dr. Frank Summers	Space Telescope Science Institute	Baltimore, MD
Ms. Kay Tobola	Lockheed Martin Corporation	Houston, TX
Dr. Gerardo Vazquez	Space Telescope Science Institute	Baltimore, MD
Mr. Ray Villard	Space Telescope Science Institute	Baltimore, MD
Ms. Donna Weaver	Space Telescope Science Institute	Baltimore, MD
Mr. Hugh Wilson	Space Telescope Science Institute	Baltimore, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	01 Oct 04	National Institute of Standards and Technology—Gaithersburg, MD	0	200	0
03 Oct 04	03 Oct 04	Tenri Cultural Institute—New York, NY	0	30	0
05 Oct 04	05 Oct 04	Maple Leaf Intermediate School—Garfield Heights, OH	0	700	0
06 Oct 04	06 Dec 04	University of Hawaii Institute for Astronomy—Hilo, HI	0	200	0
14 Oct 04	14 Oct 04	Maryland Institute College of Art—Baltimore, MD	0	400	0
14 Oct 04	14 Oct 04	Plum Point Elementary School—Huntingtown, MD	150	0	0
14 Oct 04	21 Oct 04	Kenwood High School—Baltimore, MD	20	0	0
15 Oct 04	17 Oct 04	Capclave science fiction convention—Vienna, VA	0	50	0
21 Oct 04	21 Oct 04	Glen Burnie Cub Scouts—Glen Burnie, MD	10	0	0
21 Oct 04	21 Oct 04	Montessori School—Lutherville, MD	0	30	0
21 Oct 04	21 Oct 04	Ohio State University—Columbus, OH	0	50	0
22 Oct 04	22 Oct 04	Maryland Science Center—Baltimore, MD	0	100	0
25 Oct 04	25 Oct 04	Rudolph Elementary School—Washington, DC	100	0	0
26 Oct 04	29 Oct 04	Signal Hill Elementary School—Dix Hills, NY	125	0	0
28 Oct 04	28 Oct 04	Alexandria Country Day School—Alexandria, VA	100	0	0
28 Oct 04	28 Oct 04	Johns Hopkins University—Baltimore, MD	0	80	0

01 Nov 04	01 Feb 05	NASA Ames Research Center—Moffett Field, CA	0	1500	0
08 Nov 04	12 Nov 04	American Astronomical Society/Division of Planetary Sciences—Louisville, KY	0	400	0
10 Nov 04	10 Nov 04	Lunar and Planetary Institute—Houston, TX	0	300	0
11 Nov 04	14 Nov 04	WindyCon Science Fiction Group—Palatine, IL	0	300	0
12 Nov 04	12 Nov 04	University of California, Berkeley—Berkeley, CA	0	200	0
14 Nov 04	14 Nov 04	Tech Museum of Innovation—San Jose, CA	0	100	0
15 Nov 04	15 Nov 04	University of California, Berkeley—Berkeley, CA	0	200	0
15 Nov 04	18 Nov 04	Parkmead Elementary School—Walnut Creek, CA	400	0	0
15 Nov 04	23 Nov 04	University of Arizona—Tucson, AZ	0	50	0
17 Nov 04	17 Nov 04	Plum Point Middle School—Huntingtown, MD	200	0	0
19 Nov 04	19 Nov 04	Baltimore City School System—Baltimore, MD	0	30	0
22 Nov 04	22 Nov 04	Crossroads School, The—Baltimore, MD	50	0	0
23 Nov 04	23 Nov 04	Towne School for Boys—San Francisco, CA	46	0	0
02 Dec 04	04 Dec 04	National Science Teachers Association Eastern Area Regional Conference, Richmond, VA	120	0	0
06 Dec 04	10 Dec 04	Saluda River Academy for the Arts—West Columbia, SC	65	0	0
08 Dec 04	08 Dec 04	Egremont Schools, Inc.—Chatsworth, CA	40	0	0
08 Dec 04	08 Dec 04	Rochester Institute of Technology—Rochester, NY	0	300	0
09 Dec 04	09 Dec 04	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	0	25	0
09 Dec 04	09 Dec 04	University of Washington—Seattle, WA	0	300	0
13 Dec 04	13 Dec 04	Astronomical Society of Harrisburg—Harrisburg, PA	30	0	0
13 Dec 04	17 Dec 04	Shull School—Perth Amboy, NJ	30	0	0
23 Dec 04	23 Dec 04	Deep Run Elementary School—Elkridge, MD	20	0	0
03 Jan 05	07 Jan 05	Kenwood High School—Baltimore, MD	10	0	0
08 Jan 05	08 Jan 05	Hudson River Museum Andrus Planetarium—Yonkers, NY	0	200	0
14 Jan 05	14 Jan 05	Western Colorado Math & Science Center—Clifton, CO	0	25	0
15 Jan 05	15 Jan 05	Central Appalachian Astronomy Club—Clarksburg, WV	0	200	0
24 Jan 05	15 Feb 05	Lick Observatory—Santa Cruz, CA	0	100	0
25 Jan 05	25 Jul 05	Arizona State University—Tempe, AZ	0	200	0
27 Jan 05	31 Jan 05	Stankraft, Inc.—Skokie, IL	0	100	0
28 Jan 05	28 Jan 05	Johns Hopkins University—Baltimore, MD	0	60	0
01 Feb 05	01 Feb 05	Chapelgate Christian Academy—Marriottsville, MD	9	0	0
02 Feb 05	04 Feb 05	American Museum of Natural History—New York, NY	60	0	0
08 Feb 05	08 Feb 05	Montrose County School District—Montrose, CO	0	30	0
09 Feb 05	09 Mar 05	University of Notre Dame—Notre Dame, IN	0	200	0
11 Feb 05	11 Feb 05	Tennessee State University—Nashville, TN	100	0	0
11 Feb 05	13 Feb 05	Farpoint Science Fiction Convention—Elkridge, MD	0	500	0
14 Feb 05	18 Feb 05	American Museum of Natural History—New York, NY	0	500	0
14 Feb 05	04 Mar 05	Pennsylvania State University—University Park, PA	0	100	0
15 Feb 05	18 Feb 05	East Ithaca Preschool—Ithaca, NY	0	35	0
16 Feb 05	16 Feb 05	Maryland Masonic Home—Cockeysville, MD	0	35	0
16 Feb 05	31 Mar 05	Goethe Link Observatory—Bloomington, IN	0	500	0
17 Feb 05	17 Feb 05	Auburn University—Auburn, AL	55	0	0
17 Feb 05	19 Feb 05	NASA/Norfolk State University Pre-Service Teacher Program—Alexandria, VA	0	75	0
20 Feb 05	20 Feb 05	Maryland Science Center—Baltimore, MD	15	0	0
23 Feb 05	23 Feb 05	Girl Scouts of Mount Wilson Council—Arcadia, CA	0	10	0
23 Feb 05	23 Feb 05	Maryland Science Center—Baltimore, MD	0	45	0
24 Feb 05	26 Feb 05	National Afterschool Association—San Antonio, TX	0	3000	0
25 Feb 05	25 Feb 05	Johns Hopkins University—Baltimore, MD	0	20	0
25 Feb 05	25 Feb 05	Johns Hopkins University—Baltimore, MD	300	0	0
25 Feb 05	25 Feb 05	Western Kentucky University—Bowling Green, KY	25	0	0
02 Mar 05	02 Mar 05	Girl Scouts of Black Diamond Council—Charleston, WV	0	85	0
02 Mar 05	02 Mar 05	University of Hawaii Institute for Astronomy—Hilo, HI	0	30	0
02 Mar 05	27 Apr 05	Harford Community College—Bel Air, MD	0	7	0
03 Mar 05	03 Mar 05	Space Telescope Science Institute—Baltimore, MD	0	150	0

09 Mar 05	09 Mar 05	American Institute of Physics—College Park, MD	200	0	0
10 Mar 05	10 Mar 05	Park School—Brooklandville, MD	200	0	0
10 Mar 05	12 Mar 05	Utah's Expanding Your Horizons (EYH) Conference— Orem, UT	0	1400	0
12 Mar 05	12 Mar 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	250	0
12 Mar 05	12 Mar 05	St. Peter Evangelical Lutheran Church— Baltimore, MD	0	100	0
15 Mar 05	15 Mar 05	Fifth District Elementary School—Upperco, MD	297	0	0
16 Mar 05	16 Mar 05	West Mesa High School—Albuquerque, NM	40	0	0
17 Mar 05	17 Mar 05	Princeton University—Princeton, NJ	1000	0	0
18 Mar 05	20 Mar 05	LunaCon science fiction convention— East Rutherford, NJ	0	600	0
22 Mar 05	22 Mar 05	International Museum of Art and Science— McAllen, TX	0	200	0
25 Mar 05	25 Mar 05	Endeavor Center, Maple High School Educator Resource Center—Vandenberg Air Force Base, CA	0	400	0
29 Mar 05	29 Mar 05	Night Sky Network—Pasadena, CA	0	120	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	0	100	0
02 Apr 05	02 Apr 05	USS Athena science fiction fan club—Oak Hill, VA	0	20	0
06 Apr 05	06 Apr 05	Homeschool Academy—Westminster, MD	0	120	0
06 Apr 05	06 Apr 05	Mad Science of South Orange County— Laguna Hills, CA	200	0	0
06 Apr 05	13 Apr 05	Sudbrook Magnet Middle School—Baltimore, MD	60	0	0
08 Apr 05	10 Apr 05	I-CON science fiction convention—Stony Brook, NY	0	350	0
15 Apr 05	16 Apr 05	Eagle Eye Observatory—Burnett, TX	0	100	0
16 Apr 05	16 Apr 05	Henry Hudson Planetarium—Albany, NY	0	500	0
16 Apr 05	16 Apr 05	Louisiana Art and Science Museum— Baton Rouge, LA	0	50	0
16 Apr 05	16 Apr 05	Louisiana Art and Science Museum— Baton Rouge, LA	50	0	0
19 Apr 05	19 Apr 05	Belle Grove Elementary School—Baltimore, MD	0	100	0
20 Apr 05	20 Apr 05	Maryland Science Center—Baltimore, MD	0	45	0
21 Apr 05	21 Apr 05	Johns Hopkins University—Baltimore, MD	0	70	0
21 Apr 05	21 Apr 05	Maryland Science Center—Baltimore, MD	20	0	0
23 Apr 05	23 Apr 05	Howard Astronomical League of Central Maryland— Columbia, MD	45	0	0
25 Apr 05	25 Apr 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	120	0
25 Apr 05	25 Apr 05	NASA Goddard Space Flight Center—Greenbelt, MD	0	200	0
25 Apr 05	25 Apr 05	Science Museum of Minnesota—St. Paul, MN	0	250	0
25 Apr 05	29 Apr 05	Barberton High School—Barberton, OH	150	0	0
25 Apr 05	29 Apr 05	Downey Elementary School—Westwood, MA	50	0	0
28 Apr 05	28 Apr 05	Lockheed Martin's Children's Career Day— Bethesda, MD	0	70	0
28 Apr 05	28 May 05	University of Alabama at Tuscaloosa— Tuscaloosa—AL	0	200	0
30 Apr 05	30 Apr 05	Johns Hopkins University—Baltimore, MD	0	150	0
02 May 05	02 May 05	North Marion High School—Farmington, WV	275	0	0
02 May 05	05 May 05	May Symposium—A Decade of Extrasolar Planets Around Normal Stars—Baltimore, MD	0	16	0
03 May 05	03 May 05	Doddridge County High School—West Union, WV	275	0	0
10 May 05	10 May 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	200	0
12 May 05	12 May 05	Berks County Amateur Astronomical Society— Reading, PA	0	34	0
15 May 05	15 May 05	Johns Hopkins University—Baltimore, MD	0	170	0
17 May 05	17 May 05	Youth's Benefit Elementary School—Fallston, MD	30	0	0
19 May 05	22 May 05	International Space Development Conference— Arlington, VA	0	50	0
21 May 05	21 May 05	Michigan Aerospace Alliance—Lansing, MI	0	225	0
23 May 05	23 May 05	Everett Area High School—Everett, PA	150	0	0
25 May 05	25 May 05	Youth's Benefit Elementary School—Fallston, MD	0	125	0
25 May 05	27 May 05	University of Chicago—Chicago, IL	30	0	0
27 May 05	30 May 05	BaltiCon SciFi Convention—Baltimore, MD	0	186	0
28 May 05	29 May 05	Marcon Science Fiction Group—Columbus, OH	0	200	0
30 May 05	03 Jun 05	Edgewood Middle School—Edgewood, MD	500	0	0
30 May 05	03 Jun 05	Oneida Middle School—Schenectady, NY	100	0	0

03 Jun 05	03 Jun 05	Pennsylvania State University—University Park, PA	0	100	0
04 Jun 05	04 Jun 05	Susquehanna Summer Star Spectacular—Gardners, PA	0	80	0
06 Jun 05	16 Jun 05	University of Tennessee at Martin—Martin, TN	0	250	0
10 Jun 05	10 Jun 05	Yellowstone National Park— Yellowstone National Park, WY	0	100	0
11 Jun 05	11 Jun 05	Montessori School—Lutherville, MD	0	30	0
11 Jun 05	11 Jun 05	Yellowstone National Park— Yellowstone National Park, WY	0	100	0
13 Jun 05	16 Jun 05	Five Rivers District—Jefferson City, MO	0	453	0
13 Jun 05	28 Jun 05	Navajo Elementary School—Navajo, NM	0	60	0
20 Jun 05	24 Jun 05	Western Colorado Math & Science Center— Clifton, CO	0	75	0
06 Jul 05	08 Jul 05	University of Washington—Seattle, WA	0	16	0
08 Jul 05	10 Jul 05	Shore Leave 26 science fiction convention— Hunt Valley, MD	0	400	0
08 Jul 05	08 Sep 05	Arizona State University—Tempe, AZ	0	500	0
11 Jul 05	13 Jul 05	University of Washington—Seattle, WA	0	16	0
13 Jul 05	17 Jul 05	Pennsylvania State University—University Park, PA	0	1000	0
14 Jul 05	14 Jul 05	Oklahoma State University—Washington, DC, Office—Washington, DC	0	40	0
19 Jul 05	19 Jul 05	Lafayette Natural History Museum and Planetarium— Lafayette, LA	15	0	0
19 Jul 05	19 Jul 05	Spitz Incorporated—Chadds Ford, PA	0	50	0
20 Jul 05	20 Jul 05	Little Falls Friends Meeting—Fallston, MD	0	20	0
21 Jul 05	21 Jul 05	Howard Astronomical League of Central Maryland— Columbia, MD	0	50	0
22 Jul 05	22 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	50	0
22 Jul 05	22 Jul 05	NASA Goddard Space Flight Center— Greenbelt, MD	50	0	0
26 Jul 05	26 Jul 05	International Space Camp—Huntsville, AL	75	0	0
27 Jul 05	28 Jul 05	University of Florida—Gainesville, FL	0	35	0
03 Aug 05	03 Aug 05	Raritan Valley Community College—Somerville, NJ	0	30	0
04 Aug 05	12 Aug 05	Western Colorado Math & Science Center— Clifton, CO	0	100	0
09 Aug 05	11 Aug 05	Raritan Valley Community College—Somerville, NJ	0	30	0
17 Aug 05	19 Aug 05	University of Washington—Seattle, WA	0	300	0
19 Aug 05	20 Aug 05	Astronomical Society of the Pacific— San Francisco, CA	60	0	0
01 Sep 05	04 Sep 05	DragonCon Science Fiction Group—Atlanta, GA	0	500	0
05 Sep 05	09 Sep 05	Belmont Elementary School—Olney, MD	50	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	0	350	0

A473. IMAGE: "Ask the Space Scientist"

Theme(s): Heliophysics

Msn/Prgm: IMAGE[B75]

Description: This archive of frequently asked questions about space science and astronomy is produced and maintained by a professional astronomer. Visitors may submit questions and receive replies within a few days. The service began operating in 1997.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.Primary URL: <http://image.gsfc.nasa.gov/poetry/ask/askmag.html>

Scientist(s): Dr. Sten Odenwald NASA Goddard Space Flight Center Greenbelt, MD

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Goddard Space Flight Center— Greenbelt, MD	0	0	1500000

A474. IMAGE: Museum and Library Lectures

Theme(s): Heliophysics, Planetary

Msn/Prgm: IMAGE[B75]

Description: Public talks about space science and astronomy are a critical ingredient of the IMAGE informal education program. IMAGE scientists are frequently invited to present the latest findings in space science and astronomy in a variety of public venues, including museums, planetariums, and public libraries.

Lead: Dr. Sten Odenwald, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001.

E-mail: odenwald@mail630.gsfc.nasa.gov. Phone: 301-286-6953.Primary URL: <http://image.gsfc.nasa.gov/poetry/ask/askmag.html>

Partner(s): Rice University

Houston, TX

A475. Immersive Earth: Web-Based Education

Theme(s): Earth Science

Msn/Prgm: Immersive Earth[B18]

Description: Earth Update is a software program that allows directed and supported access to NASA data via the Web. It is not a Web browser, but it pulls recent and updated maps and data products, placing them in context with extensive interpretation.

Lead: Dr. Patricia Reiff, Rice University, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.Primary URL: <http://earth.rice.edu>

Scientist(s):	Dr. Kerry Handron	Carnegie Museum of Natural History	Pittsburgh, PA
	Dr. Patricia Reiff	Rice University	Houston, TX
	Dr. Carolyn Sumners	Houston Museum of Natural Science	Houston, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	Rice University—Houston, TX	0	0	137281

A476. Landsat: Legacy Library Archives

Theme(s): Earth Science

Msn/Prgm: LDCM[B5]

Description: Given the tumultuous history of the Landsat Project, the Landsat Project Science Office (LPSO) has initiated the creation of a Landsat document archive. The project has been dubbed the Landsat Legacy. Since the first Earth-observing Landsat satellite was launched in 1972, the program has been variously administered by a multitude of government agencies and a private company. Consequently, Landsat program documentation is widely disseminated. In the summer of 2004, the LPSO teamed with the NASA Goddard Space Flight Center Library and the U.S. Geological Survey to create an archive of essential Landsat documentation for future generations to reference. The archive will eventually house technical and policy- and science-related documentation. Journal articles and other privately copyrighted materials are outside the scope of this project. To gather the more than 35 years' worth of documentation, the LPSO is soliciting program affiliates for Landsat-related materials that have been stored in personal archives. In early February 2005, the Goddard Library completed the construction of the database infrastructure needed to accommodate the Landsat Legacy archive. Then, in August 2005, the Landsat community was invited to register appropriate documents for potential placement in the new repository. The LPSO will review these registered documents, select appropriate materials, and subsequently contact potential donors to arrange a method of document submission. It is the ultimate goal of this project to have an online, freely accessible archive of Landsat documentation that can be used by the general public by 2006. In addition to this archive of printed materials, a small oral history program has been undertaken to document important aspects of the overall Landsat program history. Landsat Leaders from the earliest days of the program are being interviewed, and these tapes and transcripts will be added to the Landsat archive.

Lead: Ms. Anita Davis, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. Phone: 301-614-6669.

Primary URL: <http://library.gsfc.nasa.gov/landsat/>

Secondary

URL: <http://landsat.gsfc.nasa.gov>**A477. Mars: Web Site Science, Engineering, and Educational Content Development**

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description: Mars scientists, engineers, and other experts contribute to space science Web development by writing, editing, and ensuring the scientific and technical accuracy of Web content.

Contact: Mr. Lance Watanabe, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Lance.T.Watanabe@jpl.nasa.gov.Primary URL: <http://mars.jpl.nasa.gov>

Scientist(s):	Mr. Gene Brower	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Pat Esposito	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Goodall Kirk	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Douglas Lombardi	University of Arizona	Tucson, AZ
	Mr. Tom Thorpe	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Mike Watkins	NASA Jet Propulsion Laboratory	Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Feb 05	28 Feb 05	University of Arizona—Tucson, AZ	0	0	3102
01 Mar 05	31 Mar 05	University of Arizona—Tucson, AZ	0	0	6636
01 Apr 05	30 Apr 05	University of Arizona—Tucson, AZ	0	0	4066
01 May 05	31 May 05	University of Arizona—Tucson, AZ	0	0	4179
01 Jun 05	30 Jun 05	University of Arizona—Tucson, AZ	0	0	10228

A478. Mars: Web Spotlights

Theme(s): Planetary

Msn/Prgm: Mars Public Engagement[B97]

Description:	Mars scientists and engineers participate in creating stories about their missions, research, and roles in Mars exploration.		
Contact:	Ms. Christine Johnson, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Christine.Johnson@jpl.nasa.gov . Phone: 818-393-2634.		
Primary URL:	http://mars.jpl.nasa.gov/spotlight		
Scientist(s):	Dr. Raymond Arvidson	Washington University	St. Louis, MO
	Mr. Ron Baalke	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jim Bell	Cornell University	Ithaca, NY
	Mr. Kobie Boykins	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. John Callas	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Phil Christensen	Arizona State University	Tempe, AZ
	Dr. Joy Crisp	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Larry Crumpler	New Mexico Museum of Natural History and Science	Albuquerque, NM
	Mr. Robert G. Deen	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Howard Eisen	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Jim Erickson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jack Farmer	Arizona State University	Tempe, AZ
	Ms. Connie Gennaro	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Ronald Greeley	Arizona State University	Tempe, AZ
	Mr. Ken Herkenhoff	U.S. Geological Survey	Flagstaff, AZ
	Dr. Anton Ivanov	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Ben Jai	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Doug Jerolmack	Massachusetts Institute of Technology	Cambridge, MA
	Ms. Christine Johnson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jeffrey Johnson	U.S. Geological Survey	Flagstaff, AZ
	Mr. Byron Jones	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Sheri Klug	Arizona State University	Tempe, AZ
	Dr. Andrew Knoll	Harvard University	Cambridge, MA
	Dr. Geoffrey A. Landis	NASA Glenn Research Center	Cleveland, OH
	Ms. Stephanie Lear	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Chris Leger	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Mark Lemmon	Texas A&M University	College Station, TX
	Mr. Mark Maimone	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Justin Maki	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Alexei Malakhov	Institute for Space Research (IKI)	Moscow, Russia
	Mr. Rob Manning	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Bob Mase	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Scott Maxwell	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Gaylon McSmith	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Joe Melko	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Andy Mishkin	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Igor Mitrafanov	Institute for Space Research (IKI)	Moscow, Russia
	Mr. Lynn Neakrase	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Jeffrey Plaut	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Ali Safaeinili	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Colleen Sharkey	NASA Jet Propulsion Laboratory	Pasadena, CA
	Ms. Jascha Sohl-Dickstein	Cornell University	Ithaca, NY
	Dr. Steve Squyres	Cornell University	Ithaca, NY
	Mr. Arthur Thompson	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Shane Thompson	Arizona State University	Tempe, AZ
	Mr. Nicholas Tosca	State University of New York (SUNY), Stony Brook	Stony Brook, NY
	Ms. Michelle Viotti	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Rick Welch	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. Albert Yen	NASA Jet Propulsion Laboratory	Pasadena, CA

A479. "Measuring Vegetation Health": Exhibits and Programs

Theme(s): Earth Science

Msn/Prgm: Measuring Vegetation Health[B19]

Description: The goals of Measuring Vegetation Health are to help people understand and apply the scientific principles of light so that they may use available technologies to collect valuable information about their surroundings, to integrate these data with other remote sensing data, and then to build an integrated story of their environment. These stories may be shared to help enrich our understanding of environmental change across multiple scales of time and space. Seven collaborating institutions are developing, refining, and distributing a flexible set of hands-on activities and resources to help students and the general public learn how to monitor vegetation health in their own environment with technologies that detect and manipulate light. The materials have multiple entry points and are modular so that they may be used for focused learning of just a few concepts or for more comprehensive learning relating to complex systems.

Lead: Mr. Brian Rogan, Museum of Science, Boston, MA 02114-1099. E-mail: brogan@mos.org.

Phone: 617-589-4252.

Primary URL: <http://mvh.sr.unh.edu>

Secondary

URL: <http://www.forestwatch.sr.unh.edu/>

Partner(s): Lawrence Hall of Science
University of Southern Maine

Berkeley, CA
South Portland, ME

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Jan 05	30 Sep 05	Museum of Science—Boston, MA	0	10750	0

A480. NASA Astrobiology Institute (NAI): NAI Astrobiology in the Public Eye

Theme(s): Astrophysics, Planetary

Msn/Prgm: NAI[B62]

Description: Many of NAI's scientists are actively engaged in communicating their research to the public through interviews for television, radio, newspapers, magazines, and Internet news sites. The following is a list of media venues through which NAI scientists shared astrobiology with the public: National Geographic, CNN, BBC4, CBS, Earth and Sky radio show, Are We Alone radio show, Inside Brown, Oceanus Austrian Broadcasting Corporation (radio), KYZR Vail (radio), Astronomy magazine, Space.com, Channel 4 (U.K. television), Discovery Channel, Diario Monitor (Mexico City newspaper), Radio Bienestar (Mexico City), Reuters, and Astronomy Now. NAI's University of Colorado, Boulder, lead Team sponsored a workshop for science journalists in Yellowstone National Park, with reporters in attendance from Space.com and Myrtle Beach and Fort Wayne newspapers. Additionally, David Patterson of NAI's Marine Biological Laboratory lead Team published a book entitled "Seen and Unseen: Discovering the Microbes of Yellowstone," and Peter Ward, PI of NAI's University of Washington Lead Team, received the 2005 Washington State Book Award for "Gorgon: The Monsters That Ruled the Planet Before Dinosaurs and How They Died in the Greatest Catastrophe in Earth's History." Nine NAI scientists were featured in the NOVA television series "Origins," in which the viewer takes a "journey back to the beginning of everything; the universe, Earth, and life itself." Kevin Hand from NAI's SETI Institute lead Team and Tori Hoehler from NAI's NASA Ames Research Center lead Team participated in the IMAX film "Aliens of the Deep", and several NAI E/PO leads reviewed content for the film's educator guide. Researchers at NAI's Penn State lead Team participated in two public events, Space Day and Bides, both held at Penn State, and NAI's Virtual Planetary Laboratory lead Team participated in Mars Planet Days in Sicily.

Lead: Ms. Kristina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: Kristina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: dscalice@mail.arc.nasa.gov.

Primary URL: <http://nai.arc.nasa.gov>

A481. Navigator: Girls in Science

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Navigator Public Engagement is working with the Solar System Exploration Forum (SSE) to provide training and mentoring opportunities for girls through a NASA partnership with the Girl Scouts of the USA (GSUSA). The SSE Forum is taking the lead in NASA's partnership with GSUSA. GSUSA represents over 3.7 million girls, including 2.8 million girls ages 5-17, and close to 1 million adult members. The organization's structure (headquarters, councils, and troops) allows for national, regional, and local involvement. In addition, Navigator Public Engagement is working closely with Mt. Wilson Vista Council at the local level to engage Girl Scouts in space science activities.

Lead: Ms. Jenny Tieu, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: jenny.t.tieu@jpl.nasa.gov.

Phone: 818-393-4765.

Scientist(s): Mr. Randal Jackson

NASA Jet Propulsion Laboratory

Pasadena, CA

Ms. Jenny Tieu

NASA Jet Propulsion Laboratory

Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
12 Oct 04	12 Oct 04	Camp Mariposa—Altadena, CA	11	0	0
13 Nov 04	13 Nov 04	Soka University—Aliso Viejo, CA	19	0	0
05 Dec 04	05 Dec 04	Santa Monica Mall—Santa Monica, CA	22	0	0
15 Jan 05	15 Jan 05	Arcadia Park—Arcadia, CA	0	500	0
02 Mar 05	02 Mar 05	Airtel Plaza Hotel—Van Nuys, CA	0	200	0

A482. Navigator: "PlanetQuest"

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Navigator's award-winning PlanetQuest Web site serves as a virtual portal for Americans to join in the search for new worlds. It offers content of unprecedented richness and depth and provides opportunities for the public to learn and participate through interactive visuals, animations, and virtual-reality simulations. The dynamic, ever-changing content reflects the rapid pace of discovery in the field of extrasolar planet observation.

Lead: Mr. Randal Jackson, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: Randal.K.Jackson@jpl.nasa.gov. Phone: 818-393-5925.

Primary URL: <http://planetquest.jpl.nasa.gov>

Scientist(s): Mr. Randal Jackson NASA Jet Propulsion Laboratory Pasadena, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Oct 04	30 Sep 05	NASA Jet Propulsion Laboratory—Pasadena, CA	0	0	2 7000000

A483. Public Presentations by New England Space Scientists

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: New England space scientists, in partnership with NESSIE personnel, are appearing on stage, radio, and television to present exciting research stories to the general public. This oral presentation format continues to be a simple and effective means for space scientists to communicate their research findings and personal stories as scientists. Multimedia enhancements to this time-honored activity have enabled scientists to engage the public in new and exciting ways. Some of the events listed below involved scientists who have received coaching and other support from NESSIE personnel. This past year, topics have ranged from robots on Mars to the structure and evolution of our universe.

Lead: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.

Phone: 617-589-4228.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.

Phone: 617-589-4228.

Primary URL: <http://www.mos.org/nessie>

Secondary

URL: <http://www.mos.org/cst>

Scientist(s): Ms. Cathleen Clemens Museum of Science Boston, MA
Dr. William Waller Museum of Science Boston, MA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
03 Dec 04	03 Dec 04	Museum of Science—Boston, MA	0	275	0
04 Jun 05	04 Jun 05	Framingham State College—Framingham, MA	0	1000	0
09 Sep 05	09 Sep 05	Halibut Point State Park—Rockport, MA	20	0	0

A484. Quasars and Supermassive Black Holes

Theme(s): Astrophysics

Msn/Prgm: IDEAS[B26]

Description: The primary objectives and scope of the project were (1) to create a planetarium show on the topic of Quasars and Supermassive Black Holes and distribute it to planetariums and (2) to create a video version of the Quasars and Supermassive Black Holes show that can be used in a “stand-alone” format at Hyde Observatory and for use in schools or astronomy education.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218.

E-mail: hbradbur@stsci.edu. Phone: 410-338-4968.

Partner(s): Mueller Planetarium Lincoln, NE
University of Nebraska-Lincoln Lincoln, NE

A485. Radio, Print, and Internet Educational Outreach for NASA-Sponsored Research on Model Atmospheres and Chemical Evolution

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: StarDate/Universe radio programs, print resources, and Internet programs about NASA-sponsored research will be made available to a vast public audience, including Spanish-speakers, K–12 teachers, and students. The objectives are (1) to produce 20 StarDate and 20 Universe radio scripts that emphasize the process and procedures of the research of the parent proposal and broadcast them nationally on 550+ radio stations over a 5-year period; (2) to create a printed “Beyond the Solar System” guide, containing a sidebar highlighting the construction of model atmospheres related to this NASA-sponsored research, for distribution to the general public and high school students; and (3) to post downloadable radio scripts in RealAudio format and the “Beyond the Solar System” guide at the StarDate/Universe Web sites (in English and Spanish).

Lead: Dr. Carlos Allende-Prieto, University of Texas at Austin, Austin, TX 78712. E-mail: callende@astro.as.utexas.edu. Phone: 512-471-6493.

Contact: Ms. Sandra Preston, University of Texas at Austin, Austin, TX 78712. E-mail: sandi@astro.as.utexas.edu. Phone: 512-475-6765.

Primary URL: <http://stardate.org>

Secondary

URL: <http://radiouniverso.org>

Scientist(s): Dr. Carlos Allende University of Texas at Austin Austin, TX

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Feb 05	01 Sep 05	StarDate Radio Program—Austin, TX	0	2204000	10000

A486. Redesigning the Milky Way

Theme(s): Astrophysics

Msn/Prgm: NESSIE B/F[B40]

Description: "Redesigning the Milky Way," by William H. Waller (Tufts/NESSIE), was published in the September 2004 issue of Sky & Telescope magazine, where it made the cover page. The article summarizes scientific research on our home galaxy, based on presentations at the conference "Milky Way Surveys" that was held at Boston University in June 2003. COBE, MSX, 2Mass, Chandra, and other space science missions were featured.

Lead: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org. Phone: 617-589-4228.Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org. Phone: 617-589-4228.Primary URL: <http://skyandtelescope.com>

Secondary

URL: <http://ase.tufts.edu/physics/faculty.htm>**A487. Science Education Gateway/National Virtual Observatory**

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: SRT[B28]

Description: This online gateway leads students, educators, and the public to the wonders of astronomy and space science.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.Primary URL: <http://cse.ssl.berkeley.edu/segway/index.html>Scientist(s): Mr. Stephen Ledvina Ocean View Elementary School
Dr. Bryan Mendez University of California, BerkeleyAlbany, CA
Berkeley, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
10 Nov 04	10 Nov 04	Joaquin Miller Elementary School—Oakland, CA	36	0	0
26 Jan 05	26 Jan 05	Ocean View Elementary School—Albany, CA	26	0	0

A488. SOFIA: Conference Exhibit Booth (Scientific Conferences)

Theme(s): Astrophysics

Msn/Prgm: SOFIA[B53]

Description: The SOFIA E/PO program exhibits at professional astronomy conferences. In addition to outreach to the scientific community, the SOFIA exhibit attracts the interest of teachers, journalists, and members of the general public attending these conferences. The exhibit consists of an infrared camera demonstration, literature on the education and science programs of SOFIA, and staff members who answer questions and interact with visitors.

Lead: Dr. Dana Backman, NASA Ames Research Center, Moffett Field, CA 94035.
E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.Contact: Ms. Leslie Proudfit, NASA Ames Research Center, Moffett Field, CA 94035. E-mail: lwolber@mail.arc.nasa.gov. Phone: 650-604-2125.Primary URL: http://sofia.arc.nasa.gov/Edu/calendar/edu_calendar.htmlScientist(s): Dr. Dana Backman NASA Ames Research Center
Mr. Michael Bennett Astronomical Society of the Pacific
Ms. Edna DeVore Search for Extraterrestrial Intelligence (SETI) Institute
Ms. Darlene Mendoza Astronomical Society of the Pacific
Ms. Leslie Proudfit NASA Ames Research CenterMoffett Field, CA
San Francisco, CA
Mountain View, CA
San Francisco, CA
Moffett Field, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Nov 04	12 Nov 04	American Astronomical Society/Division of Planetary Sciences—Louisville, KY	15	1000	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	50	350	0

A489. Space Place: Contributions to National Association for Bilingual Education (NABE) News

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: ST-5[B92], Stardust[B111]

Description: NABE publishes a Space Place column in both English and Spanish in each of its bimonthly issues of NABE News. Bilingual educators can use the easy-to-read, side-by-side columns to help students learn either English or Spanish.

Contact: Ms. Liliana Novati, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.Primary URL: <http://spaceplace.nasa.gov>Scientist(s): Ms. Diane Fisher NASA Jet Propulsion Laboratory
Partner(s): "National Association for Bilingual Education (NABE) News"Pasadena, CA
Washington, DC

A490. Space Place: Contributions to Newspapers

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SST[B52], ST-7[B64], Voyager[B72], ST-5[B92], New Horizons (Pluto-Kuiper Belt) Mission[B105], Deep Impact[B108], Stardust[B111]
 Description: A number of large-city daily newspapers (circulation totaling 2.5 million) publish a monthly Space Place column that we provide. Currently, 15 newspapers carry the column, 8 in English and 7 in Spanish. Most of the English-language papers use the articles on their Reading by 9 pages for kids. The Spanish-language papers use the articles on their education or science pages.
 Contact: Ms. Liliana Novati, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.
 Primary URL: <http://spaceplace.nasa.gov>
 Scientist(s): Ms. Diane Fisher NASA Jet Propulsion Laboratory Pasadena, CA
 Dr. Tony Phillips NASA Jet Propulsion Laboratory Pasadena, CA
 Partner(s): "Chronicle-Telegram" Elyria, OH
 "Daily Courier" Kelowna, Canada
 "Denver Post" Denver, CO
 "El Hispano" Dallas, TX
 "El Nuevo Dia" Guaynabo, Puerto Rico
 "Herald Standard" Uniontown, PA
 "La Oferta" San Jose, CA
 "La OpiniUn" Los Angeles, CA
 "Los Angeles Times" Los Angeles, CA
 "Noticias del Mundo" Long Island City, NY
 "Prensa Hispana" Phoenix, AZ
 "Sentinel, The" Seabrook, MD
 "South Bend Tribune" South Bend, IN
 "Times Record" Brunswick, ME
 "Vistazo" San Jose, CA

A491. Space Science for Amateur Astronomers

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SEU[B35], DePaul B/F[B37]
 Description: The Chicago Astronomical Society and other amateur societies have a strong interest in astronomy and space science education. Our goal is to further develop the partnership between the SMD Support Network and Missions and amateur astronomers in the Midwest, as well as to identify high-leverage opportunities to partner with amateurs in bringing space science to midwestern schoolchildren and teachers, e.g., through classroom visits and star parties.
 Lead: Dr. Bernhard Beck-Winchatz, DePaul University, Chicago, IL 60604. E-mail: bbeck@codor.depaul.edu. Phone: 773-325-4545.
 Primary URL: <http://www.chicagoastro.org/>
 Scientist(s): Dr. Bernhard Beck-Winchatz DePaul University Chicago, IL
 Partner(s): Chicago Astronomical Society Chicago, IL

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Sep 05	11 Sep 05	Astrofest 2005—Kankakee, IL	0	35	0

A492. Space Science Institute: Interactive Exhibits at Community Events

Theme(s): Heliophysics, Astrophysics, Planetary
 Msn/Prgm: SSI B/F[B42]
 Description: The Space Science Institute (SSI) has created a mobile space science outreach exhibit (500 square feet), staffed by SSI educators and scientists to provide hands-on, interactive experiences and NASA outreach materials for all ages at a variety of community events. This small road show was creatively assembled from prototype components of SSI's traveling exhibits, Alien Earths, the Space Weather Center, Electric Space, and MarsQuest. Our interactive exhibits have been very successful; this year, they have provided support for the Colorado Science Convention, the annual Colorado MESA (Mathematics, Engineering, and Science Achievement) event, and various science career fairs in our region. SSI education staff have also developed family astronomy games and a series of Family Guides for use in these interactive exhibits that are extremely successful in engaging parents with their children.
 Lead: Dr. Cheryl Lynn Morrow, Space Science Institute, Boulder, CO 80301. E-mail: camorrow@colorado.edu. Phone: 720-974-5828.
 Contact: Ms. Amy Wilkerson, Space Science Institute, Boulder, CO 80301. E-mail: awilkerson@colorado.edu. Phone: 720-974-5833.
 Primary URL: <http://www.spacescience.org>
 Partner(s): Colorado Mathematics, Engineering, Science Achievement (MESA) Denver, CO
 Colorado Science Convention Committee Franktown, CO
 Denver Museum of Nature and Science Denver, CO
 University of Colorado, Boulder Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
03 Mar 05	03 Mar 05	University of Colorado, Boulder—Boulder, CO	6	0	0
10 Sep 05	10 Sep 05	Colorado Mathematics, Engineering, Science Achievement (MESA)—Denver, CO	46	0	0

A493. StarDate Guide to the Solar System

Theme(s): Heliophysics, Planetary

Msn/Prgm: SRT[B28]

Description: The goal of the StarDate Guide to the Solar System program is to provide information on the solar system and the PI's research on planetary atmospheres to the general public, parents, K–12 teachers, students, and Spanish-speakers. The objectives are as follows: (1) rewrite, update, design, and print 30,000 copies of the StarDate Guide to the Solar System; (2) design and post the content at StarDate Online and highlight the PI's research with regard to the outer planets; (3) translate the content of the StarDate Guide to the Solar System and the PI's research into Spanish and design and post a Universo Online. The McDonald Observatory Public Information and Education Office receives many letters each year from parents, teachers, and children interested in astronomy and space studies requesting information on specific topics, often for a classroom assignment or a science fair project. Many children also write after reading one or more books in Isaac Asimov's series of astronomy books for children, which list McDonald Observatory as a source of additional information on space. Many K–12 teachers request information when teaching the solar system section of their science classes. In response to these requests, we developed the Guide in 1995, along with a Spanish-language version of the Guide, entitled Universo Gu'a del Sistema Solar. The Guide will be produced in a 40-page, full-color format similar to StarDate magazine, which we produce every other month. We will distribute the Guide in bulk to NASA brokers, teacher resource centers, Space Grant offices, and observatory visitor centers at no cost. We will also offer individual copies available for a small fee. We will post the Guide at StarDate Online and translate it and post it at Universo Online. The online versions of the Guide and the What Are Astronomers Doing? Web site will highlight the PI's NASA research supported in his grant, Ground Based Studies of the Outer Planets.

Lead: Dr. Laurence Trafton, University of Texas at Austin, Austin, TX 78712. E-mail: lm@astro.as.utexas.edu.
Phone: 512-471-1476.

Primary URL: <http://stardate.org/>

Secondary

URL: <http://radiouniverso.org/>

Scientist(s): Dr. Laurence Trafton

University of Texas at Austin

Austin, TX

A494. StarDate/Universo Radio Programs on Magnetic Fields and Exploding Stars

Theme(s): Astrophysics

Msn/Prgm: SRT[B28]

Description: Our goal is to produce and broadcast new StarDate and Universo radio programs to make a vast public audience, including Spanish-speakers, K–12 teachers, and students, aware of the PI's magnetic-field and exploding-star research supported by NASA and to provide them with Internet resources that can deepen their understanding. Objectives: (1) produce 21 StarDate and 21 Universo (Spanish-language) radio scripts that emphasize the process, procedures, and results of the PI's NASA research; (2) broadcast the programs nationally on 550+ radio stations to a daily audience of 2.2 million listeners and provide them to 100 K–12 classrooms nationally, reaching 10,000 students; (3) post RealAudio versions of both the StarDate and Universo programs and the downloadable archived radio scripts at the StarDate / Universo Web sites (in English and Spanish); and (4) perform formative and summative evaluations and report the results at professional meetings. More than 2.2 million listeners daily hear the 2-minute StarDate and Universo astronomy radio programs on 550+ commercial, public, and noncommercial radio stations nationwide. StarDate celebrated 25 years on the radio in 2003 and is the longest running science program on the Nation's airwaves. Universo celebrated 10 years on the air in 2005. A new and different program is produced and aired in both English and Spanish 365 days a year.

Lead: Dr. Craig Wheeler, University of Texas at Austin, Austin, TX 78712. E-mail: wheel@astro.as.utexas.edu.
Phone: 512-471-6407.

Primary URL: <http://stardate.org/>

Secondary

URL: <http://radiouniverso.org>

Scientist(s): Dr. Craig Wheeler

University of Texas at Austin

Austin, TX

A495. STEREO/IMPACT: Public Outreach

Theme(s): Heliophysics

Msn/Prgm: STEREO[B88]

Description: STEREO is the third of five Solar Terrestrial Probes. This mission will obtain simultaneous images of the Sun from two spacecraft and build a 3-D picture of coronal mass ejections (CMEs) and the complex structures around them. STEREO will also study the propagation of disturbances through the heliosphere and their effects at Earth orbit. The STEREO E/PO program participates in the Sun-Earth Connection Education Forum-sponsored workshops that meet the needs of educators at all grade levels. We present these workshops to inservice educators to teach them about the most recent and relevant solar and STEREO science discoveries, which they will then teach in their classrooms. Mission scientists participate in the workshops to share the science content. Education specialists provide integrated, hands-on activities to demonstrate science application in the class-

room. The missions also provide images and animations to support programs that have been developed by the science centers specifically for educators and for the general public.

Lead: Dr. Nahide Craig, University of California, Berkeley, Berkeley, CA 94720. E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

Contact: Dr. Laura Peticolas, University of California, Berkeley, Berkeley, CA 94720. E-mail: laura@ssl.berkeley.edu. Phone: 510-643-7273.

Scientist(s):	Ms. Kerri Beisser	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Linda Butler	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Ms. Kristi Marren	Johns Hopkins University Applied Physics Laboratory	Laurel, MD
	Mr. Ed Reynolds	Johns Hopkins University Applied Physics Laboratory	Laurel, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Oct 04	31 Oct 04	Comcast Cable—Baltimore, MD	0	400000	0

A496. Sun Explorer Activity Backpack

Theme(s): Heliophysics

Msn/Prgm: Solar-B[B87]

Description: The Sun Explorer Activity Backpack is a set of simple Sun-based activities designed to be self-run by families with children. The activities are carried in a backpack that is checked out to interested public visitors, who then conduct the activities at times and places of their choosing. There are six activities included, ranging in complexity to accommodate children from 5 years of age to early teens.

Lead: Mr. Benjamin Burruss, Chabot Space and Science Center, Oakland, CA 94619. E-mail: bburruss@chabotspace.org. Phone: 510-336-7308.

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Jul 05	30 Sep 05	Chabot Space and Science Center—Oakland, CA	0	100	0

A497. Sun-Earth Connection Education and Public Outreach Electronic Newsletter

Theme(s): Heliophysics

Msn/Prgm: SECEF[B36]

Description: "The Sun-Earth CONNECTION" is an online E/PO newsletter for the Sun-Earth Connection science community and others who are interested in this space science theme. The newsletter is issued approximately every 6 weeks. The goal is to keep the SEC Forum community informed about the latest events and activities for educators and the public and to provide a chance to contribute notices about accomplishments in the realm of education and public outreach.

Lead: Ms. Karin Hauck, University of California, Berkeley, Berkeley, CA 94720. E-mail: karin@ssl.berkeley.edu. Phone: 510-642-2343.

Primary URL: <http://sunearth.ssl.berkeley.edu/SECNews>

Scientist(s):	Mr. Troy Cline	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. Isabel Hawkins	University of California, Berkeley	Berkeley, CA
	Ms. Carolyn Ng	NASA Goddard Space Flight Center	Greenbelt, MD
	Dr. James Thieman	NASA Goddard Space Flight Center	Greenbelt, MD
	Ms. Jackie Wong	University of California, Berkeley	Berkeley, CA

A498. Sun-Earth Connection: Presentation and Inquiry Resources for Scientists in K-12 Classrooms

Theme(s): Heliophysics

Msn/Prgm: SRT[B28]

Description: Scientists have new resources designed to enhance their outreach about Sun-Earth Connections in middle school classrooms, including an annotated educational PowerPoint presentation featuring images recommended by NCAR High Altitude Observatory (HAO) researchers, lesson plans serving as springboards for inquiry, kits that scientists may use when doing the activities, and tips for planning with teachers to support students' academic needs and interests. NCAR scientists are being oriented to these resources in hands-on workshops facilitated by UCAR's Office of Education and Outreach (EO). Electronic resources are accessed on EO and HAO Web sites. The kits are managed and distributed to staff by EO. In an effort to integrate this E/PO activity with resources reaching broader audiences and research activities funded by other agencies, the lessons and slides have been incorporated into a new Teacher's Guide to the NCAR Climate Discovery Exhibit. This accomplishment has brought much-needed additional standards-aligned science content about the Sun's influence on Earth's climate to teachers with school groups touring the NCAR Mesa Lab. Teacher evaluators have reviewed the Sun-Earth Connection resources, which now complement a previously developed unit of the guide about Climate Past (solar and volcanic influences on past climate and proxy data about the Little Ice Age). Separate funding sources will enable EO to complete the Teacher's Guide in the next year with the addition of units containing lessons about Climate Now (Earth system dynamics) and Climate Future (climate modeling, uncertainty, and global change).

Lead: Dr. Gang Lu, National Center for Atmospheric Research, Boulder, CO 80305. E-mail: ganglu@ucar.edu.

Phone: 303-497-1554.

Contact: Ms. Susan Foster, University Corporation for Atmospheric Research, Boulder, CO 80305.

E-mail: susanf@ucar.edu. Phone: 303-497-2595.

Primary URL: <http://eo.ucar.edu/educators/ClimateDiscovery/SEC.htm>

Scientist(s): Dr. Gang Lu University Corporation for Atmospheric Research Boulder, CO

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
01 Jun 05	30 Sep 05	University Corporation for Atmospheric Research— Boulder, CO	7	0	0

A499. Testing Einstein's Universe Exhibit

Theme(s): Astrophysics

Msn/Prgm: GP-B[B48]

Description: The "Testing Einstein's Universe" exhibit is a collection of interactive displays, demonstrations, and posters that are set up for 1-day exhibits at various public outreach events (e.g., Stanford University Community Day, Sally Ride Festival, and Space Day).

Lead: Ms. Shannon Range, Stanford University, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.

Primary URL: <http://einstein.stanford.edu>

Secondary

URL: <http://www.stanford.edu/dept/news/neighbors/communityday/>

Scientist(s): Mr. Ken Bower Stanford University Stanford, CA
Dr. Dave Hipkins Stanford University Stanford, CA
Mr. Dave Meriwether Stanford University Stanford, CA
Dr. Alex Silbergleit Stanford University Stanford, CA

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
17 Oct 04	17 Oct 04	Sally Ride Festival—Stanford, CA	0	600	0
10 Apr 05	10 Apr 05	Stanford University Community Day 2005— Stanford, CA	0	4100	0

A500. The Dragon Ate What? From Dragons to Eclipses: Improving Girl Scouts' Appreciation of Astronomy

Theme(s): Heliophysics, Astrophysics

Msn/Prgm: IDEAS[B26]

Description: The primary objective was to motivate interest in the sciences, specifically astronomy, among the target audience of Junior and Cadet Girl Scouts. The program piloted the granting of pins that commemorated some special astronomical event, such as eclipses or meteor showers. To obtain a pin, the scouts completed certain requirements and were asked to complete pre- and posttests. Workshops were held both before and during the grant period to acquaint leaders with the upcoming events and to make spectroscopes and other devices in an attempt to motivate leader involvement.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: hbradbur@stsci.edu.
Phone: 410-338-4968.

Scientist(s): Dr. Mitzi Adams NASA Marshall Space Flight Center Marshall Space Flight Center, AL
Ms. Elizabeth Simmons Holy Spirit Regional School Huntsville, AL
Partner(s): Fernbank Science Center Atlanta, GA
Girl Scouts of North Alabama Huntsville, AL
Girl Scouts of Northwest Georgia Atlanta, GA
Wernher von Braun Planetarium Huntsville, AL

A501. "To Mars with MER"

Theme(s): Planetary

Msn/Prgm: P2K[B32], JPL SSE[B96], Mars Public Engagement[B97], 2001 Mars Odyssey[B98], MER[B99], MGS[B100], Mars Pathfinder[B101], MRO[B102], MSL[B103]

Description: To Mars with MER (TMwM) uses the science, engineering, and human stories of the Mars Exploration Rover (MER) to excite youngsters across America about the exploration of the solar system and inform them about Earth-Mars comparisons and high-tech careers. Supported by a major grant from the National Science Foundation Informal Science Education program, as well as the Science Mission Directorate, TMwM includes multimedia and targeted outreach activities. Beginning in spring 2003 and concluding in summer 2005, the project offers three live and interactive broadcasts for schools and science centers, three prime-time documentaries for general audiences, a Web site supporting the programs, hands-on activities developed by Passport to Knowledge (P2K) and others, and outreach both to inner-city youngsters and to those in rural communities. Working with the Space Science Institute, Boulder, P2K is supporting outreach events relating to the Space Science Institute's traveling Mars exhibits at planetarium conferences and rural sites.

Lead: Mr. Geoffrey Haines-Stiles, Passport to Knowledge (P2K), Morristown, NJ 07960.

E-mail: ghs@passporttoknowledge.com. Phone: 973-656-9403.

Primary URL: <http://passporttoknowledge.com/mars>

Secondary

URL: <http://passporttoknowledge.com>

Scientist(s):	Dr. Deborah Bass Mr. Kobie Boykins Mr. Prasun Desai Ms. Sheri Klug Mr. David Lavery Ms. Zoe Learner Dr. Wayne Lee Mr. Douglas Lombardi Dr. Jim Rice Mr. Jason Soderblom Mr. Adam Steltzner Ms. Julie Townsend Ms. Jennifer Trosper Ms. Paige Valderrama Dr. Shonte Wright	NASA Jet Propulsion Laboratory NASA Jet Propulsion Laboratory NASA Langley Research Center Arizona State University NASA Headquarters Science Mission Directorate Cornell University NASA Jet Propulsion Laboratory University of Arizona Arizona State University Cornell University NASA Jet Propulsion Laboratory NASA Jet Propulsion Laboratory NASA Jet Propulsion Laboratory Arizona State University NASA Jet Propulsion Laboratory	Pasadena, CA Pasadena, CA Hampton, VA Tempe, AZ Washington, DC Ithaca, NY Pasadena, CA Tucson, AZ Tempe, AZ Ithaca, NY Pasadena, CA Pasadena, CA Pasadena, CA Tempe, AZ Pasadena, CA
Partner(s):	American Association for the Advancement of Science Arizona State University Ball Aerospace Technologies Corporation Ball State University Boeing Company, The California Institute of Technology (Caltech) Cornell University Deep Space Network DePaul University George Washington University Goldstone Deep Space Communications Complex Harvard University Houston Museum of Natural Science Howard University Idaho Helicopters, Inc. ILC Dover, Inc. International Planetarium Society KETC-TV, Channel 9/St. Louis Lockheed Martin Space Systems Lunar and Planetary Institute Macomb County Community College Malin Space Science Systems NASA Ames Research Center NASA Glenn Research Center NASA Goddard Space Flight Center NASA Headquarters NASA Headquarters Office of Education NASA Headquarters Office of Public Affairs NASA Headquarters Science Mission Directorate NASA Headquarters Space Operations Mission Directorate NASA Johnson Space Center NASA Kennedy Space Center NASA Kennedy Space Center Visitor Center NASA Langley Research Center National Center for Atmospheric Research National Science Foundation Planetary Society Space Telescope Science Institute St. Louis Science Center U.S. Air Force U.S. Geological Survey U.S. Naval Observatory University of Houston University of Houston—Downtown University of Texas at Brownsville Washington University	Washington, DC Tempe, AZ Boulder, CO Muncie, IN Everett, WA Pasadena, CA Ithaca, NY Madrid, Spain Chicago, IL Washington, DC Fort Irwin, CA Cambridge, MA Houston, TX Washington, DC Boise, ID Frederica, DE Los Angeles, CA St. Louis, MO Littleton, CO Houston, TX Warren, MI La Jolla, CA Moffett Field, CA Cleveland, OH Greenbelt, MD Washington, DC Washington, DC Washington, DC Washington, DC Washington, DC Houston, TX Kennedy Space Center, FL Kennedy Space Center, FL Hampton, VA Boulder, CO Arlington, VA Pasadena, CA Baltimore, MD St. Louis, MO Washington, DC Flagstaff, AZ Washington, DC Houston, TX Houston, TX Brownsville, TX St. Louis, MO	

Event(s):			Direct Part.	Anon. Part	Web Part.
Start Date	End Date	Venue			
05 Oct 04	05 Oct 04	Ethyl Universe Planetarium—Richmond, VA	260	0	0
05 Oct 04	30 May 05	Ethyl Universe Planetarium—Richmond, VA	550	0	0

29 Jan 05	30 Jan 05	North Carolina Museum of Natural Sciences— Raleigh, NC	50	8000	0
29 Jan 05	30 Jan 05	North Carolina Museum of Natural Sciences— Raleigh, NC	73	0	0
19 Feb 05	19 Feb 05	Detroit Science Center—Detroit, MI	0	500	0
19 Feb 05	19 Feb 05	Detroit Science Center—Detroit, MI	50	0	0
05 Mar 05	05 Mar 05	Exploration Place—Wichita, KS	0	500	0
05 Mar 05	05 Mar 05	Exploration Place—Wichita, KS	75	0	0
05 May 05	05 May 05	Smithsonian National Air and Space Museum (NASM)—Washington, DC	0	2000	0

A502. Ulysses: Web Site

Theme(s): Heliophysics

Msn/Prgm: Ulysses[B71]

Description: The Ulysses project provides images, press/news releases, data, mission profiles, educational materials, trajectories, etc., for public access via the Web.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.Primary URL: <http://ulysses.jpl.nasa.gov>

Scientist(s): Ms. Andrea Angrum NASA Jet Propulsion Laboratory Pasadena, CA

A503. Voyager: Web Site

Theme(s): Heliophysics

Msn/Prgm: Voyager[B72]

Description: The Voyager Web site supplies the general public with Voyager 1 and 2 background information (the Grand Tour), trajectories, mission profiles, science data, images, educational activities, press and news releases, bibliography of science papers, etc.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, Pasadena, CA 91109.

E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.Primary URL: <http://www.voyager.jpl.nasa.gov>

Scientist(s): Ms. Andrea Angrum NASA Jet Propulsion Laboratory Pasadena, CA

A504. "WeatherStreet.com"

Theme(s): Earth Science

Msn/Prgm: Aqua[B2]

Description: "WeatherStreet.com" is a comprehensive 60, 000-page weather Web site owned by Danny Braswell, Sr., research scientist at the University of Alabama-Huntsville, and Roy Spencer, the U.S. Advanced Microwave Scanning Radiometer for EOS (AMSR-E) Science Team Lead. The hurricane section of the Web site (about 40 pages) contains sea surface temperature images from AMSR-E. These data are processed by Remote Sensing Systems in Santa Rosa, CA.

Lead: Dr. Roy Spencer, University of Alabama at Huntsville, Huntsville, AL 35899.

E-mail: roy.spencer-1@nasa.gov. Phone: 256-961-7960.Primary URL: <http://www.weatherstreet.com>**A505. "What's New on the Outer Planets?"**

Theme(s): Planetary

Msn/Prgm: SRT[B28], HST[B49]

Description: "What's New on the Outer Planets?" works through the Small Museums program to bring interactive kiosk presentations centering on Saturn, Uranus, Neptune, Jupiter, and Titan to smaller, local museums and planetariums. Our prototype kiosk has brought current research on these planets to the University of Wisconsin-Madison Geology Museum and Rockford's Discovery Center Museum and will continue to travel across the Midwest.

Lead: Dr. Sanjay Limaye, University of Wisconsin-Madison, Madison, WI 53706. E-mail: SanjayL@ssec.wisc.edu.

Phone: 608-262-9541.

Contact: Ms. Rosalyn Pertzborn, University of Wisconsin-Madison, Madison, WI 53706. E-mail: rosep@ssec.wisc.edu.

Phone: 608-265-4160.

Primary URL: <http://tellus.ssec.wisc.edu/outreach>

Scientist(s):	Dr. Walt Harris	University of Wisconsin-Madison	Madison, WI
	Dr. Erich Karkoschka	University of Arizona	Tucson, AZ
	Dr. Mark Lemmon	Texas A&M University	College Station, TX
	Dr. Sanjay Limaye	University of Wisconsin-Madison	Madison, WI
	Ms. Rosalyn Pertzborn	University of Wisconsin-Madison	Madison, WI
	Dr. Lawrence Sromovsky	University of Wisconsin-Madison	Madison, WI
Partner(s):	Science Center of Iowa		Des Moines, IA

Event(s):

Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Aug 05	30 Sep 05	University of Wisconsin Space Place—Madison, WI	0	1722	0

Partner(s):	Dr. Joannes Westerink	Notre Dame University	South Bend, IN
	Dr. Barbara Williams	University of Delaware	Newark, DE
	Coalition to Diversify Computing		Evanston, IL
	Institute for African American e-Culture		Boston, MA
	National Association of Black Geologists and Geophysicists		Houston, TX
	National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)		Washington, DC
	National Society of Black Physicists		Arlington, VA
	National Society of Hispanic Physicists		Nashville, TN

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Jun 05	30 Sep 05	DePaul University—Chicago, IL	3	0	0
01 Jun 05	30 Sep 05	Fisk University—Nashville, TN	2	0	0
01 Jun 05	30 Sep 05	University of Alabama at Huntsville—Huntsville, AL	2	0	0
01 Jun 05	30 Sep 05	University of Chicago—Chicago, IL	4	0	0
01 Jun 05	30 Sep 05	University of Delaware—Newark, DE	2	0	0
01 Jun 05	30 Sep 05	Western Kentucky University—Bowling Green, KY	2	0	0

A509. Hubble Space Telescope: Cycle Education and Public Outreach Grant Program

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: HST[B49]

Description: The NASA Science Mission Directorate has established a comprehensive approach to providing education and public outreach (E/PO) that enhances the public's understanding of space science and has incorporated these objectives as integral components of all missions and research programs. One component is to provide an opportunity for Hubble Space Telescope (HST) Cycle General Observers, Archival and Snapshot (GO/AR/SNAP) researchers, and current Hubble Fellows to submit proposals for an E/PO supplement to the parent research program. The spirit of the HST Cycle E/PO Grant Program is to encourage collaborative efforts between professional astronomers/space scientists and professional educators that would broaden the knowledge and understanding of the latest discoveries of the Hubble Space Telescope.

Contact: Ms. Heather Bradbury, Space Telescope Science Institute, Baltimore, MD 21218. E-mail: hbradbur@stsci.edu. Phone: 410-338-4968.

Primary URL: <http://cycle-epo.stsci.edu/>

Scientist(s):	Dr. Jill Bechtold	University of Arizona	Tucson, AZ
	Dr. Robin Evans	Gibbel Corporation	Montrose, CA
	Dr. Peter Garnavich	University of Notre Dame	Notre Dame, IN
	Dr. Nickolay Gnedin	U.S. Air Force Academy	Colorado Springs, CO
	Dr. Edward Murphy	University of Virginia	Charlottesville, VA
	Dr. Vera Rubin	Carnegie Institution of Washington	Washington, DC
	Dr. Trinh Thuan	University of Virginia	Charlottesville, VA
	Mr. Ken Wilson	Science Museum of Virginia	Richmond, VA
	Dr. Yusefi-Zadeh	Northeastern University	Chicago, IL

A510. Kepler: Presentations by Scientists and Engineers

Theme(s): Astrophysics, Planetary

Msn/Prgm: Kepler[B50]

Description: Kepler scientists and engineers are encouraged to make presentations about the NASA Kepler mission in classrooms, at conferences, and at public events.

Lead: Mr. Alan Gould, Lawrence Hall of Science, Berkeley, CA 94720-5200. E-mail: agould@uclink4.berkeley.edu. Phone: 510-643-5082.

Primary URL: <http://kepler.nasa.gov>

Scientist(s):	Dr. Dan Aafedt	Ball Aerospace Technologies Corporation	Boulder, CO
	Dr. Gibor Basri	University of California, Berkeley	Berkeley, CA
	Dr. Troy Bergstrom	Ball Aerospace Technologies Corporation	Boulder, CO
	Dr. Matt Bobrowsky	Space Telescope Science Institute	Baltimore, MD
	Dr. William Borucki	NASA Ames Research Center	Moffett Field, CA
	Dr. Alan Boss	Carnegie Institution of Washington	Washington, DC
	Mr. Ken Brandt	NASA Ames Research Center	Moffett Field, CA
	Ms. Sally Cahill	NASA Ames Research Center	Moffett Field, CA
	Dr. Douglas Caldwell	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Ms. Nagin Cox	NASA Jet Propulsion Laboratory	Pasadena, CA
	Mr. William Deininger	Ball Aerospace Technologies Corporation	Boulder, CO
	Ms. Edna DeVore	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA
	Dr. Edward "Ted" Dunham	Lowell Observatory	Flagstaff, AZ
	Dr. Riley Duren	NASA Jet Propulsion Laboratory	Pasadena, CA
	Dr. Alan Gould	Lawrence Hall of Science	Berkeley, CA
	Ms. Pamela Harman	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, CA

Mr. Robert Jackson	NASA Ames Research Center	Moffett Field, CA
Dr. Jon Jenkins	NASA Ames Research Center	Moffett Field, CA
Dr. David Koch	NASA Ames Research Center	Moffett Field, CA
Mr. Toshi Komatsu	University of California, Berkeley	Berkeley, CA
Mr. Yoji Kondo	NASA Goddard Space Flight Center	Greenbelt, MD
Mr. David Latham	Harvard-Smithsonian Center for Astrophysics	Cambridge, MA
Mr. Jack Lissauer	NASA Ames Research Center	Moffett Field, CA
Dr. Geoff Marcy	San Francisco State University	San Francisco, CA
Dr. Jill Tarter	Search for Extraterrestrial Intelligence (SETI) Institute	Mountain View, Dr.
Adam Thodey	Ball Aerospace Technologies Corporation	Boulder, CO
Mr. Bryce Unruh	Ball Aerospace Technologies Corporation	Boulder, CO
Dr. Janice Voss	NASA Ames Research Center	Moffett Field, CA
Dr. Stuart Walker	Ball Aerospace Technologies Corporation	Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
05 Oct 04	05 Oct 04	University of Colorado, Boulder—Boulder, CO	50	0	0
16 Oct 04	16 Oct 04	Camp Billy Joe—Kenton, OK	0	120	0
20 Oct 04	20 Oct 04	NASA Ames Research Center—Moffett Field, CA	0	40	0
21 Oct 04	21 Oct 04	NASA Ames Research Center—Moffett Field, CA	15	0	0
25 Oct 04	25 Oct 04	Tabor College—Hillsboro, KS	196	0	0
27 Oct 04	27 Oct 04	NASA Ames Research Center—Moffett Field, CA	24	0	0
05 Nov 04	05 Nov 04	College of San Mateo—San Mateo, CA	41	29	0
05 Nov 04	05 Nov 04	Colorado State University—Fort Collins, CO	22	0	0
10 Nov 04	10 Nov 04	Harvard-Smithsonian Center for Astrophysics—Cambridge, MA	0	7	0
18 Nov 04	18 Nov 04	Stonehill College—Easton, MA	20	6	0
19 Nov 04	19 Nov 04	Sheraton Seattle Hotel & Towers—Seattle, WA	18	0	0
22 Nov 04	22 Nov 04	Rome Planetarium—Rome, Italy	0	250	0
23 Nov 04	23 Nov 04	Milan Planetarium—Milan, Italy	0	250	0
10 Dec 04	12 Dec 04	Philadelphia Marriott Downtown—Philadelphia, PA	0	1500	0
22 Dec 04	22 Dec 04	Kiwanis Club of West San Jose—Santa Clara, CA	6	30	0
10 Jan 05	10 Jan 05	Town and Country Resort and Conference Center—San Diego, CA	0	70	0
12 Jan 05	12 Jan 05	Lucie Stern Community Center—Palo Alto, CA	15	0	0
19 Jan 05	19 Jan 05	Massachusetts Institute of Technology—Cambridge, MA	0	30	0
19 Jan 05	19 Jan 05	NASA Ames Research Center—Moffett Field, CA	12	8	0
22 Jan 05	22 Jan 05	Embassy Suites—Anaheim, CA	65	0	0
01 Feb 05	03 Feb 05	Beckman Conference Center—Irvine, CA	30	0	0
04 Feb 05	04 Feb 05	Wiggins Junior-Senior High School—Wiggins, CO	0	32	0
06 Feb 05	11 Feb 05	Conference on Planet Formation and Detection—Aspen, CO	160	10	0
14 Feb 05	15 Feb 05	Santa Fe Institute—Santa Fe, NM	25	0	0
18 Feb 05	18 Feb 05	Seaholm High School—Birmingham, MI	500	0	0
19 Feb 05	19 Feb 05	Cranbrook Institute of Science—Bloomfield Hills, MI	0	150	0
21 Feb 05	21 Feb 05	Space Telescope Science Institute—Baltimore, MD	0	40	0
22 Feb 05	22 Feb 05	Arlington Science Focus School—Arlington, VA	0	30	0
22 Feb 05	22 Feb 05	Massachusetts Institute of Technology—Cambridge, MA	0	310	0
02 Mar 05	02 Mar 05	University of California, Berkeley—Berkeley, CA	0	55	0
02 Mar 05	02 Mar 05	University of California, Santa Cruz—Santa Cruz, CA	0	260	0
11 Mar 05	11 Mar 05	Marin Country Day School—Corte Madera, CA	74	0	0
19 Mar 05	19 Mar 05	Lowell Observatory—Flagstaff, AZ	0	35	0
20 Mar 05	20 Mar 05	Lawrence Hall of Science—Berkeley, CA	6	34	0
28 Mar 05	28 Mar 05	California Institute of Technology (Caltech)—Pasadena, CA	5	0	0
29 Mar 05	29 Mar 05	Huntington Library and Gardens—San Marino, CA	0	350	0
30 Mar 05	03 Apr 05	National Science Teachers Association National Conference—Dallas, TX	25	0	0
08 Apr 05	08 Apr 05	University of St. Thomas—St. Paul, MN	0	350	0
08 Apr 05	10 Apr 05	State University of New York (SUNY), Stony Brook—Stony Brook, NY	0	200	0
11 Apr 05	11 Apr 05	NASA Ames Research Center—Moffett Field, CA	0	400	0

13 Apr 05	13 Apr 05	Proctor Terrace Elementary School— Santa Rosa, CA	0	50	0
17 Apr 05	17 Apr 05	Morrison Planetarium—San Francisco, CA	0	92	0
21 Apr 05	21 Apr 05	Chicago Lighthouse for the Blind—Chicago, IL	0	300	0
27 Apr 05	27 Apr 05	NASA Ames Research Center—Moffett Field, CA	0	42	0
05 May 05	05 May 05	Eisenhower Elementary School—Boulder, CO	0	23	0
09 May 05	09 May 05	Hirsch Elementary School—Fremont, CA	70	0	0
09 May 05	09 May 05	Swanson Elementary School—Arvada, CO	100	0	0
18 May 05	18 May 05	Eisenhower Elementary School—Boulder, CO	0	86	0
24 May 05	24 May 05	San Diego Aerospace Museum—San Diego, CA	0	75	0
25 May 05	25 May 05	Cornell Entrepreneur Network (CEN)—Ithaca, NY	0	300	0
26 May 05	26 May 05	Pinecrest Elementary School— Thousand Oaks, CA	150	0	0
27 May 05	30 May 05	Baltimore Science Fiction Convention— Hunt Valley, MD	0	80	0
31 May 05	31 May 05	Los Alamos National Laboratory—Los Alamos, NM	0	100	0
01 Jun 05	01 Jun 05	Stanford Park Hotel—Menlo Park, CA	0	25	0
18 Jun 05	18 Jun 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	6	0
22 Jun 05	22 Jun 05	NASA Ames Research Center—Moffett Field, CA	28	0	0
28 Jun 05	28 Jun 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	247	0
30 Jun 05	30 Jun 05	Rayburn House Office Building—Washington, DC	60	0	0
03 Jul 05	03 Jul 05	Warner Springs Ranch—Warner Springs, CA	0	200	0
10 Jul 05	10 Jul 05	Planetarium Prague—Prague, Czech Republic	0	100	0
11 Jul 05	11 Jul 05	Rochester Riverside Convention Center— Rochester, NY	0	900	0
14 Jul 05	14 Jul 05	Lawrence Hall of Science—Berkeley, CA	70	0	0
23 Jul 05	23 Jul 05	Happy Valley School—Ojai, CA	0	91	0
25 Jul 05	25 Jul 05	Happy Valley School—Ojai, CA	41	0	0
26 Jul 05	26 Jul 05	Summer Science Program, Inc.—Healdsburg, CA	0	35	0
03 Aug 05	03 Aug 05	NASA Ames Research Center—Moffett Field, CA	0	20	0
03 Aug 05	03 Aug 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	49	0
06 Aug 05	06 Aug 05	NASA Ames Research Center—Moffett Field, CA	30	0	0
08 Aug 05	08 Aug 05	KQED-TV, Channel 9/San Francisco— San Francisco, CA	0	4000	0
11 Aug 05	11 Aug 05	Santa Cruz Astronomy Club—Santa Cruz, CA	0	75	0
17 Aug 05	17 Aug 05	Randall Museum—San Francisco, CA	0	60	0
06 Sep 05	08 Sep 05	Western Alliance of Planetariums Conference 2005—Boulder, CO	0	30	0
07 Sep 05	07 Sep 05	George Mason University—Fairfax, VA	0	30	0
08 Sep 05	08 Sep 05	Purdue University—West Lafayette, IN	50	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	0	30	0
25 Sep 05	25 Sep 05	Search for Extraterrestrial Intelligence (SETI) Institute—Mountain View, CA	0	80	0
27 Sep 05	27 Sep 05	Boy Scout Troop #51—Golden, CO	0	19	0
30 Sep 05	30 Sep 05	Lawrence Livermore National Laboratory— Livermore, CA	0	130	0

A511. MARSSB: NASA Explorer Institute

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: MARSSB[B39]

Description: The Mid-Atlantic Region Space Science Broker (MARSSB) helped recruit, facilitate, and evaluate the EdVenture Group's NASA Explorer Institute (NEI) program (focus groups), which involved 20 science center and museum educators from the Mid-Atlantic region. The program took place in Atlanta, GA. We also coauthored the final report.

Lead: Mr. Todd Ensign, EdVenture Group, Morgantown, WV 26501. E-mail: tensign@fairmontstate.edu.
Phone: 304-367-8436.

Contact: Ms. Jill Fratto, EdVenture Group, Morgantown, WV 26501. E-mail: jmfratto@edvgroup.org.
Phone: 678-560-2629.

Primary URL: <http://education.nasa.gov/divisions/informal/overview/>

Secondary

URL: <http://www.nasa.gov>

Scientist(s): Ms. Debbie Galloway

NASA Headquarters

Washington, DC

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
22 Feb 05	23 Feb 05	EdVenture Group—Morgantown, WV	22	0	0

A512. NASA Astrobiology Institute (NAI): NAI Trains the Next Generation of Astrobiologists

Theme(s): Astrophysics, Planetary

Msn/Prgm: NAI[B62]

Description: The success of astrobiology relies in no small part on the first generation of astrobiologists engaging undergraduate and graduate students. NAI scientists have developed and taught 30 courses in astrobiology at their various universities and have served as faculty for three international summer schools in astrobiology in Spain, France, and Vatican City. NAI's Penn State Lead: Team has both an undergraduate minor and a dual-title Ph.D. program in astrobiology, while NAI's University of Washington Lead: Team sponsors a certificate in astrobiology. Several programs across NAI's Lead: Teams, such as the Women In Science and Engineering Research at Penn State, and the Summer Undergraduate Internship In Astrobiology at NAI's NASA Goddard Space Flight Center Lead: Team provided mentoring to 41 undergraduate students through internships and summer experiences. Three NAI Lead: Teams served as host sites for the National Science Foundation's Research Experiences for Undergraduates (REU): the Indiana/Princeton/Tennessee Astrobiology Initiative, Pennsylvania State University, and the University of Hawaii.

Lead: Ms. Kristina Wilmoth, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: Kristina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Moffett Field, CA 94035.

E-mail: dscalice@mail.arc.nasa.gov.Primary URL: <http://nai.nasa.gov>**A513. Navigator: Science Conferences**

Theme(s): Astrophysics

Msn/Prgm: Navigator Program[B59]

Description: Navigator participates in science-related events with exhibits and demonstrations to engage the public in the ongoing research and discoveries related to extrasolar planet searching.

Lead: Ms. Jenny Tieu, NASA Jet Propulsion Laboratory, Pasadena, CA 91109. E-mail: jenny.t.tieu@jpl.nasa.gov.

Phone: 818-393-4765.

Scientist(s): Ms. Edna DeVore

Search for Extraterrestrial Intelligence (SETI)
InstituteMountain View,
Pasadena, CA
Pasadena, CA
San Francisco, CA
Baltimore, MD
Pasadena, CA
Pasadena, CA

Dr. Charles Elachi

NASA Jet Propulsion Laboratory

Mr. Michael Greene

NASA Jet Propulsion Laboratory

Dr. Geoff Marcy

San Francisco State University

Mr. John Stoke

Space Telescope Science Institute

Dr. Michelle Thaller

California Institute of Technology (Caltech)

Dr. Stephen Unwin

NASA Jet Propulsion Laboratory

Event(s):			Direct Part.	Anon. Part.	Web Part.
Start Date	End Date	Venue			
08 Nov 04	12 Nov 04	American Astronomical Society/Division of Planetary Sciences—Louisville, KY	0	670	0
28 Jun 05	30 Jun 05	NASA's Search for New Worlds—Washington, DC	0	200	0

A514. NESSIE: Outreach at Professional Conferences

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: The New England Space Science Initiative in Education (NESSIE) has promoted space science education at a variety of professional conferences. These opportunities for professional outreach and development directly involved space scientists as the target audience or as partners in educational programming for formal and informal educators. This year, NESSIE represented the NASA/SMD E/PO Support Network at conferences of the American Astronomical Society (AAS), the American Geophysical Union (AGU), the Astronomical Society of the Pacific (ASP), the Lunar and Planetary Institute (LPI), and a research conference on Star Formation in the Age of Three Great Observatories.

Lead: Dr. Cary Sneider, Museum of Science, Boston, MA 02114-1099. E-mail: nessie@mos.org.

Phone: 617-589-0227.

Contact: Dr. William Waller, Museum of Science, Boston, MA 02114-1099. E-mail: wwaller@mos.org.

Phone: 617-589-4228.

Primary URL: <http://www.mos.org/nessie>

Secondary

URL: <http://www.astrosociety.org>

Scientist(s):

Ms. Erin Dokter

University of Arizona

Tucson, AZ

Dr. Andrew Fraknoi

Astronomical Society of the Pacific

San Francisco, CA

Dr. George Greenstein

Amherst College

Amherst, MA

Dr. Laurie Ruberg

Wheeling Jesuit University

Wheeling, WV

Dr. Stephanie Shipp

Rice University

Houston, TX

Dr. Denise Smith
Dr. William Waller

Space Telescope Science Institute
Tufts University

Baltimore, MD
Medford, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting— San Diego, CA	0	300	0
23 May 05	27 May 05	American Geophysical Union Annual Summer Meeting—New Orleans, LA	0	30	0
13 Jul 05	15 Jul 05	Star Formation in the Era of Three Great Observatories—Cambridge, MA	70	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	20	100	0

A515. New England Space Scientists in the Classroom

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: NESSIE B/F[B40]

Description: New England space scientists, in partnership with K–12 educators, are bringing their knowledge of space science and enthusiasm for space exploration to the classroom. These scientist-educator partnerships are some of the most effective and rewarding ways for space scientists to become engaged in E/PO. The events listed below involve space scientists who have received professional development through NESSIE and its partners. Many of the scientists have been trained in E/PO alongside classroom educators so that they can understand the myriad issues and concerns related to K–12 education.

Lead: Ms. Cathleen Clemens, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138.

E-mail: cclemens@mos.org. Phone: 617-589-0227.

Primary URL: <http://www.mos.org/nessie>

Secondary

URL: <http://hea-www.harvard.edu/astro/index.html>

Scientist(s):	Mr. Steve Beikman	Harvard University	Cambridge, MA
	Ms. Cathleen Clemens	Museum of Science	Boston, MA
	Dr. Samuel Kounaves	Tufts University	Medford, MA
	Ms. Karen Spence	Museum of Science	Boston, MA

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
28 Mar 05	28 Mar 05	Hills Garrison Elementary School—Hudson, NH	22	0	0
05 May 05	05 May 05	McCall Middle School—Winchester, MA	351	0	0

A516. Preservice Educator Poster Presentation

Theme(s): Astrophysics

Msn/Prgm: ASO[B33], MARSSB[B39]

Description: The Space Science Support Network presented “Exploring Ways to Help Pre-Service Teachers Meet Science Education Challenges” as a poster presentation at the American Astronomical Society meeting.

Lead: Dr. Laurie Ruberg, Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV 26003.

E-mail: lruberg@cet.edu. Phone: 304-243-2480.

Primary URL: <http://www.aas.org/>

Secondary

URL: <http://marssb.cet.edu>

Scientist(s):	Dr. Laurie Ruberg	Wheeling Jesuit University	Wheeling, WV
	Dr. Stephanie Shipp	Rice University	Houston, TX
	Dr. Denise Smith	Space Telescope Science Institute	Baltimore, MD

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting— San Diego, CA	70	0	0

A517. “Regional Opportunities for Scientists in Education” (“ROSIE”)

Theme(s): Heliophysics, Astrophysics, Planetary

Msn/Prgm: SSI B/F[B42]

Description: The Broker/Facilitator at the Space Science Institute in Boulder, CO, has an electronic bulletin called ROSIE. The newsletter serves scientists interested in science education and public outreach, as well as Leaders of education and public outreach (E/PO) programs in scientific research institutions that perform space or Earth science research in the Western States. ROSIE informs participants of regional and national opportunities such as (1) job announcements, (2) E/PO funding opportunities, (3) professional development opportunities in education and public outreach, (4) regional E/PO involvement opportunities, and (5) information about potential partners and networking opportunities. ROSIE is a quarterly newsletter with occasional special bulletins for time-critical opportunities.

Lead: Ms. Christy Edwards, Space Science Institute, Boulder, CO 80301. E-mail: edwards@spacescience.org.
Phone: 720-974-5824.

Primary URL: <http://halvas.spacescience.org/Broker/rosie/>

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	01 Oct 04	30 Sep 05	Space Science Institute—Boulder, CO	0	2000	0

A518. SEU Forum: Mission Support

Theme(s):	Astrophysics					
Msn/Prgm:	SEU[B35], CXO[B44], Constellation-X[B46], GLAST[B47], GP-B[B48], LISA[B51], CHIPS[B54], Swift[B57], HEASARC[B65], HETE-2[B67]					
Description:	The SEU Forum supports the SEU mission E/PO programs in a variety of ways, including professional development workshops, support meetings, teleconferences, and development of cross-forum activities to relay themes in a coherent way to the public and to science educators.					
Lead:	Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138. E-mail: mdussault@cfa.harvard.edu . Phone: 617-496-7962.					
Primary URL:	http://universeforum.org					
Scientist(s):	Ms. Beth Barbier	NASA Goddard Space Flight Center			Greenbelt, MD	
	Ms. Lindsay Bartolone	Adler Planetarium and Astronomy Museum			Chicago, IL	
	Dr. Larry Cooper	NASA Headquarters Science Mission Directorate			Washington, DC	
	Dr. Nahide Craig	University of California, Berkeley			Berkeley, CA	
	Ms. Sandra Daly	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Ms. Mary Dussault	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Dr. Roy Gould	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Dr. Jennifer Grier	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Dr. Michelle Larson	Pennsylvania State University			University Park, PA	
	Ms. Kathleen Lestition	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Dr. Bryan Mendez	University of California, Berkeley			Berkeley, CA	
	Ms. Shannon Range	Stanford University			Stanford, CA	
	Ms. Erika Reinfeld	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	
	Ms. Sarah Silva	Sonoma State University			Rohnert Park, CA	
	Dr. Denise Smith	Space Telescope Science Institute			Baltimore, MD	
	Dr. Simon Steel	Harvard-Smithsonian Center for Astrophysics			Cambridge, MA	

Event(s):	Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
	14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	10	0	0

A519. Sun-Earth Connection Education Forum (SECEF): Targeted Outreach to Native Americans

Theme(s):	Heliophysics					
Msn/Prgm:	SECEF[B36]					
Description:	One Earth, One Universe is a collaboration between the Native American Academy and the NASA Science Mission Directorate. The efforts led to the One Earth, One Universe workshop held February 14-18, 2005, in Santa Fe, NM, and again August 29-September 2 in Blaine, WA. The workshops brought professional researchers and educators trained in Western science together with Native American scholars who were both traditionally and university trained. The participants began the task of developing a learning community in which divergent views about the nature and practice of science could be embraced and expanded the inquiry to more fully encompass Indigenous knowledge systems and Native ways of knowing. In followup workshops, the participants hope to engage in the worthwhile endeavor of exploring collaborative efforts between Western and Native science. Such collaborative efforts have the potential of contributing to the scientific endeavor and to enhancing and broadening everyone's participation in a more inclusive scientific paradigm.					
Lead:	Mr. Troy Cline, NASA Goddard Space Flight Center, Greenbelt, MD 20771-0001. E-mail: cline@mail630.gsfc.nasa.gov . Phone: 301-286-6606.					
Contact:	Dr. Greg Schultz, University of California, Berkeley, Berkeley, CA 94720. E-mail: schultz@ssl.berkeley.edu . Phone: 510-643-0012.					
Primary URL:	http://sunearth.gsfc.nasa.gov/sunearthday/native.htm					
Secondary URL:	http://www.oneearthoneuniverse.org/workshop.html					
Scientist(s):	Mr. Troy Cline	NASA Goddard Space Flight Center			Greenbelt, MD	
	Dr. Nancy Maryboy	Diné College			Tsaile, AZ	
	Ms. Carolyn Ng	NASA Goddard Space Flight Center			Greenbelt, MD	

A520. Workshops, Sessions, and Seminars for Scientists and E/PO leads on K-14 Education and Public Outreach

Theme(s):	Heliophysics, Astrophysics, Planetary					
Msn/Prgm:	IDEAS[B26], ASO[B33], SSE[B34], SEU[B35], SECEF[B36], MARSSB[B39], NESSIE B/F[B40], SSI B/F[B42], S2N2 B/F[B43], LWS/PO[B90]					
Description:	The Space Science Institute (SSI) of Boulder, CO, and its Broker program conduct 4-day workshops 3-day special-topic workshops; conference sessions/tutorials; and local seminars for space scientists, engineers, and managers of K-14 education and public outreach (E/PO) programs. Approximately 800 participants and guest presenters have been served. The goals of the 4-day workshops are (1) to enhance and sustain a					

national cadre of well-informed NASA scientists, engineers, and E/PO managers who can act as advocates and Leaders for effective science education and as role models for colleagues engaged in E/PO activities; (2) to strengthen and increase the effectiveness of the education activities involving the NASA science and engineering communities that are currently (and soon to be) under way; and (3) to provide scientists, engineers, and E/PO managers who are active in E/PO with focused and ongoing opportunities for showcasing their work and networking with colleagues and education experts. The 3-day workshops are intended to focus on particular E/PO topics in more detail (e.g., professional development of teachers, informal education, and educational technology). This year, SSI hosted a 3-day Leadership course entitled "How to Provide an Effective Education Workshop for Scientists."

Lead: Dr. Cherilynn Morrow, Space Science Institute, Boulder, CO 80301. E-mail: camorrow@colorado.edu.
Phone: 720-974-5828.

Primary URL: <http://www.spacescience.org>

Scientist(s): Dr. Nahide Craig University of California, Berkeley

Partner(s): American Astronomical Society

American Geophysical Union

California Institute of Technology (Caltech)

Exploratorium

Indigenous Education Institute

NASA Goddard Space Flight Center

National Academy of Sciences

National Science Foundation

Scientists in Education Working Group

Stratospheric Observatory For Infrared Astronomy (SOFIA)

University Corporation for Atmospheric Research

University of Arizona

University of California

University of Colorado

Berkeley, CA

Washington, DC

Washington, DC

Pasadena, CA

San Francisco, CA

Bluff, UT

Greenbelt, MD

Washington, DC

Arlington, VA

Boulder, CO

Moffett Field, CA

Boulder, CO

Tucson, AZ

Berkeley, Berkeley, CA

Boulder, Boulder, CO

Event(s):					
Start Date	End Date	Venue	Direct Part.	Anon. Part.	Web Part.
01 Nov 04	04 Nov 04	Earth Science Educator Roadmap Community— Pacific Grove, CA	50	0	0
13 Dec 04	17 Dec 04	American Geophysical Union Annual Fall Meeting— San Francisco, CA	100	0	0
08 Jan 05	13 Jan 05	American Astronomical Society 205th Meeting— San Diego, CA	60	0	0
09 Jan 05	13 Jan 05	85th American Meteorological Society Annual Meeting—San Diego, CA	60	0	0
18 Feb 05	18 Feb 05	American Association for the Advancement of Science—Washington, DC	50	0	0
23 May 05	27 May 05	American Geophysical Union Annual Summer Meeting—New Orleans, LA	40	0	0
06 Sep 05	08 Sep 05	Western Alliance of Planetariums Conference 2005—Boulder, CO	80	0	0
14 Sep 05	16 Sep 05	Astronomical Society of the Pacific 117th Annual Meeting—Tucson, AZ	50	0	0

APPENDIX B. Directory of SMD E/PO Programs

This directory provides overview information on the overall Education and Public Outreach (E/PO) program activities of each Science Mission Directorate (SMD) mission or program. (A list of mission/program acronyms is provided in appendix I.) Each listing contains the following information:

Title:

Title of the mission or program.

Description:

Overview description of the E/PO activities conducted by the mission or program.

Lead:

Person or organization with lead E/PO responsibility for the mission or program.

Contact:

Person or organization with contact E/PO responsibility for the mission or program.

URL:

Web address for further information on the mission's or program's E/PO activities.

Activities (or Grants):

Indexed listing of all E/PO products and activities conducted or supported by the mission or program (or of all active E/PO grants supported by the program).

The listings are grouped into categories as follows:

Earth Science Missions and Programs

- Earth Science Missions
- Earth Science Projects

Space Science Programs and Partnerships

- Grants Programs
- Major Partnerships

Space Science Education and Public Outreach (E/PO) Support Network

- Forums
- Broker/Facilitators

Astrophysics Missions

- Major Missions
- Explorers
- Navigator
- Attached Payloads
- Other NASA Programs
- International Missions with NASA Participation

Heliophysics Missions

- Major Missions
- Explorers
- International Solar-Terrestrial Physics (ISTP)
- Solar Terrestrial Probes (STP)
- Other NASA Programs
- International Missions with NASA Participation

Planetary Science Missions

- Major Missions
- Mars Exploration Program
- New Frontiers
- Discovery
- Other NASA Programs
- International Missions with NASA Participation

EARTH SCIENCE MISSIONS AND PROGRAMS

Earth Science Missions

B1. ACRIMSAT

Description: The ACRIMSAT Mission will measure Total Solar Irradiance (TSI) during its 5-year mission life. The ACRIMSAT spacecraft, carrying the Active Cavity Radiometer Irradiance Monitor III (ACRIM III) instrument, was the second-ary payload on a Taurus vehicle that launched in December 1999. The instrument, third in a series of long-term solar-monitoring tools built for NASA by the Jet Propulsion Laboratory, will continue to extend the database first created by ACRIM I, which was launched in 1980 on the Solar Maximum Mission (SMM) spacecraft. ACRIM II followed on the Upper Atmosphere Research Satellite (UARS) in 1991. The ACRIM I instrument was the first to demonstrate clearly that the total radiant energy from the Sun was not a constant. However, the solar variability was so slight (0.1 percent of full scale) that continuous monitoring by state-of-the-art instrumentation was necessary. It is theorized that as much as 25 percent of the anticipated global warming of Earth may be solar in origin. In addition, seemingly small (0.5-percent) changes in the TSI output of the Sun over a century or more may cause significant climatological changes on Earth.

URL: http://science.hq.nasa.gov/missions/satellite_55.htm

Activities: Earth System Science Fellowship Program [A8]

B2. Aqua

Description: Aqua is a NASA Earth science satellite mission named for the large amount of information that the mission is collecting about Earth's water cycle, including evaporation from the oceans, water vapor in the atmosphere, clouds, precipitation, soil moisture, sea ice, land ice, and snow cover on the land and ice. Additional variables also being measured by Aqua include radiative energy fluxes; aerosols; vegetation cover on the land; phytoplankton and dissolved organic matter in the oceans; and air, land, and water temperatures. The Aqua mission is a part of the NASA-centered international Earth Observing System (EOS). Aqua was formerly named EOS PM, signifying its afternoon equatorial crossing time. Aqua was launched on May 4, 2002, and has six Earth-observing instruments on board, collecting a variety of global data sets. Aqua was the first member launched of a group of satellites termed the Afternoon Constellation, or sometimes the A-Train. The second member to be launched was Aura, in July 2004, and the third member was the Polarization & Anisotropy of Reflectances for Atmospheric Sciences coupled with Observations from a Lidar (PARASOL), in December 2004. The next members launched were CloudSat and Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO), in April 2006.

URL: http://science.hq.nasa.gov/missions/satellite_17.htm

Activities: Aqua: Presentations by the Aqua Project Scientist [A391]

Aqua: Web Site [A449]

Atmospheric Infrared Sounder (AIRS) Student Internship [A7]

Atmospheric Infrared Sounder (AIRS): Public Web Site [A453]

Atmospheric Infrared Sounder (AIRS): Automated Daily Weather Maps [A454]

Atmospheric Infrared Sounder (AIRS): Earth Science Music Video [A455]

Atmospheric Infrared Sounder (AIRS): Quarterly Newsletter [A456]

LA's Better Educated Students for Tomorrow (BEST) [A294]

Satellite Observations in Science Education [A231]

"WeatherStreet.com" [A504]

B3. Aura

Description: The Aura mission researches the composition, chemistry, and dynamics of Earth's atmosphere and studies the ozone, air quality, and climate. The Aura project supports a strong educational and public outreach (E/PO) effort through formal and informal education partnerships with organizations that are leaders in science education and communication. Our partners include the Smithsonian Institution's National Museum of Natural History (NMNH), the American Chemical Society (ACS), and the GLOBE Program. Our goal is to educate students and the public and inform industry and policymakers how Aura will lead to a better understanding of the global environment.

URL: http://science.hq.nasa.gov/missions/satellite_22.htm

Activities: Explorer Institute [A401]

GLOBE Atmospheres Workshop [A65]

B4. Gravity Recovery And Climate Experiment

GRACE

Description: To learn more about the mysteries of gravity, twin satellites named GRACE~URL:http://science.hq.nasa.gov/missions/satellite_19.htm

Activities: Americorp Training [A39]

Austin Science Fun Day [A265]

GRACE: Bridge Point Elementary School Science Day [A283]

GRACE: Brykerwood Elementary School Science Day [A284]

GRACE: California Science Educator Conference [A67]

GRACE: Earth Science Week Career Fair [A285]

GRACE: High School Career Fair [A286]

GRACE: High School Design Challenge [A287]
 GRACE: Minorities Introduction to Engineering [A288]
 GRACE: NASA Space Education Workshop [A68]
 GRACE: NASA Student Involvement Program [A289]
 GRACE: National Science Teachers Association Workshop [A69]
 GRACE: Santa Clarita Science Day [A290]
 GRACE: Science Teacher Association of Texas [A70]
 GRACE: Space Education Workshop [A71]
 GRACE: Space Exploration Educators Conference [A72]
 GRACE: Technology Preparation [A199]
 GRACE: UT Explore [A407]
 LiftOff Summer Institute [A85]
 Texas School for the Blind and Visually Impaired (TSBVI) Educator Training [A164]

B5. Landsat Data Continuity Mission

LDCM

Description: As of December 23, 2005, the Landsat Data Continuity Mission (LDCM) strategy has been to acquire a single Landsat Data Continuity Mission in the form of a free-flying spacecraft. The Landsat Data Continuity Mission (LDCM) is the future of Landsat satellites. It will continue to obtain valuable data and imagery to be used in agriculture, education, business, science, and government. The Landsat Program provides repetitive acquisition of high-resolution multispectral data about Earth's surface on a global basis. The instrument aboard LDCM will collect land surface data consistent with data from the previous Landsat satellites. Landsat satellites have collected data about Earth's continental surfaces to support global change research and applications. These data constitute the longest continuous record of Earth's surface as seen from space. By imaging Earth's land environment at a resolution sufficient to record the impacts of human activities, Landsat provides an important complement to U.S. global imagers such as MODIS, MISR, and AVHRR.

Lead: Ms. Anita Davis, NASA Goddard Space Flight Center, Mail Stop 614.0, Greenbelt Road, Greenbelt, MD 20771-0001. Phone: 301-614-6669.

URL: <http://ldcm.nasa.gov/>

Activities: "Earth as Parks" Online Exhibit [A465]
 Landsat Data Continuity Mission (LDCM): Student Internship [A293]
 Landsat: Legacy Library Archives [A476]
 Landsat: Teacher Workshops [A83]

B6. Nightglow

Description: The Nightglow mission is a collaboration among the NASA Goddard Space Flight Center, the University of Utah, and the New Mexico State University Particle Astrophysics Lab to measure the UV glow (nightglow) of Earth's atmosphere. The Nightglow instrument consists of three large-image telescopes instrumented with two large-image photomultiplier tubes (PMT). A PMT is a very sensitive device for converting light into an electronic signal. A filter is used to limit the light entering the telescopes to wavelengths between 300 and 400 nanometers-in the invisible, near-ultra-violet part of the spectrum. The large-image electronics are controlled by a small-format 386 microprocessor. One of the three main telescopes looks down at all times, while the other two rotate. The two telescopes that rotate view the ground, the horizon, and the UV glow at high altitudes (above the balloon at approximately 90 kilometers). This high-altitude nightglow comes from the excited states of the gases in the atmosphere, mainly nitrogen and oxygen.

Lead: Ms. Sandra Daly, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138. E-mail: sdaly@cfa.harvard.edu. Phone: 617-496-4784.

Contact: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

URL: <http://nightglow.gsfc.nasa.gov/>

Activities: Nightglow: Remote Sensing Activities [A226]

B7. Quick Scatterometer

QuikSCAT

Description: The QuikSCAT mission is intended to record sea surface wind speed and direction data under all weather and cloud conditions over Earth's oceans. QuikSCAT operates in a near-polar orbit. It flies in a circular orbit at an altitude of approximately 800 kilometers (500 miles) above Earth's surface. It completes a full orbit in about 101 minutes, which translates to a little more than 14 orbits per day. SeaWinds is the main instrument on the QuikSCAT satellite. SeaWinds is an active radar scatterometer. This scatterometer operates by transmitting high-frequency microwave pulses to the ocean surface and measuring the echoed radar pulses bounced back to the satellite. The scatterometer estimates wind speed and direction over Earth's oceans at 10 meters above the surface of the water.

URL: http://science.hq.nasa.gov/missions/satellite_51.htm

Activities: Earth and Space Science Education Product Workshop [A54]

B8. Terra

Description: On February 24, 2000, Terra began collecting what will ultimately become a new, 15-year global data set on which to base scientific investigations about our complex home planet. The Terra satellite is the flagship of EOS.

It will provide global data on the state of the atmosphere, land, and oceans, as well as their interactions with solar radiation and with one another.

URL: http://science.hq.nasa.gov/missions/satellite_52.htm

Activities: Satellite Observations in Science Education [A231]

B9. Total Ozone Mapping Spectrometer/Earth Probe

TOMS/EP

Description: The Total Ozone Mapping Spectrometer, launched in July 1996 aboard an Earth Probe Satellite, continues NASA's long-term daily mapping of the global distribution of Earth's atmospheric ozone. TOMS/EP takes high-resolution measurements of the total column amount of ozone from space.

URL: http://science.hq.nasa.gov/missions/satellite_27.htm

Activities: Earth and Space Science Education Product Workshop [A54]

B10. Tropical Rainfall Measuring Mission

TRMM

Description: The Tropical Rainfall Measuring Mission (TRMM) is a NASA satellite that provides information both to test and to improve climate models. TRMM is particularly devoted to determining rainfall in Earth's tropics and subtropics. These regions make up about two-thirds of the total rainfall on Earth and are responsible for driving our weather and climate system. TRMM will contribute to a better understanding of where and how much the winds blow, where the clouds form and rain occurs, where floods and droughts will occur, and how the winds drive the ocean currents. TRMM will do this not just by providing rainfall data, but, more importantly, by providing information on heat released into the atmosphere as part of the process that leads to rain.

URL: http://science.hq.nasa.gov/missions/satellite_28.htm

Activities: Earth and Space Science Education Product Workshop [A54]

Earth Science Programs

B11. "Earth Observatory"

Description: The purpose of NASA's "Earth Observatory" is to provide a freely accessible publication on the Internet where the public can obtain new satellite imagery and scientific information about our home planet. The focus is on Earth's climate and environmental change. In particular, we hope our site is useful to public media and educators. Any and all materials published on "Earth Observatory" are freely available for re-publication or reuse, except where copyright is indicated.

URL: <http://earthobservatory.nasa.gov/>

Activities: "Earth Observatory" Web Site [A466]

Earth to Sky-An Innovative Partnership: NASA and the National Park Service [A383]

B12. Earth System Science Education Alliance

ESSEA

Description: From 2000 to 2005, colleges and universities across the United States have been offering online Earth System Science (ESS) courses for K-12 teachers through NASA's ESSEA program. The three available courses-for teachers of grades K-4, 5-8, and 9-12 are each 16 weeks long, are delivered completely over the Internet, and feature student-centered, knowledge-building virtual communities. The courses were developed for NASA within the Center for Educational Technologies (CET) at Wheeling Jesuit University; ESSEA is managed by the Institute for Global Environmental Strategies (IGES) and CET through funding from NASA. Between 2000 and 2005, over 1,500 teachers from 41 States have completed at least one of the three ESSEA courses through 20 participating colleges and universities. These diverse colleges and universities comprise six minority-serving institutions (including Historically Black Colleges and Universities and Hispanic-Serving Institutions); many ESSEA universities also serve rural and disadvantaged (e.g., high-poverty and urban) communities. ESSEA uses an instructional model that has proven effective and successful for K-12 science teacher education. This model addresses content and process, i.e., knowledge of Earth system science and the appropriate inquiry-based methods to teach it.

Lead: Ms. Theresa Schwerin, Institute for Global Environmental Strategies, 1600 Wilson Boulevard Suite 901, Arlington, VA 22209. E-mail: theresa_schwerin@strategies.org. Phone: 703-312-0825.

URL: <http://www.cet.edu/essea>

Activities: Alabama A&M Earth System Science Education Alliance (ESSEA): 5-8 Online Course [A167]

B13. Earth System Science Education for the 21st Century

ESSE 21

Description: ESSE 21, a leader in systemic change for interdisciplinary Earth system science education at the undergraduate level, emphasizes the understanding of Earth as a system of interrelated air, water, land, life, and social processes. Led by the Universities Space Research Association (USRA) and sponsored by NASA, ESSE 21 offers colleges and universities small, competitive grants to develop Earth system science courses, curricula, and degree programs. ESSE 21 engages a collaborative community of educators and scientists as partners in jointly developing and sharing courses and learning resources focused on Earth system science research and applications. ESSE 21 places special emphasis on reaching minority-serving institutions (MSIs). ESSE 21 participants stimulate their students' critical and creative thinking with Earth system models, research results, data, and visualizations available from NASA and the broader interdisciplinary community engaged in Earth system sci-

ence. These resources increase opportunities for teaching and learning about Earth as a system while developing competency in underlying STEM principles. Expanding Earth system science at our Nation's universities is critical to developing a workforce qualified to address our society's challenging Earth system and environmental problems while fostering a scientifically literate citizenry that can make informed decisions about these problems. ESSE 21 actively engages minority-serving institutions as community members and partners, providing a rich and supportive framework to explore and develop materials and courses that strive for educational excellence and meet specific minority institutional needs. ESSE 21 fosters deep and long-term relationships among research and education colleagues from around the country.

Lead: Dr. Donald Johnson, Universities Space Research Association, 10227 Wincopin Circle, Suite 212, Columbia, MD 21044-3498. E-mail: donj@ssec.wisc.edu. Phone: 608-262-2538.

Contact: Mr. Martin Ruzek, Universities Space Research Association, 8426 Polifka Road, Whitelaw, WI 54247. E-mail: ruzek@usra.edu. Phone: 920-732-3316.

URL: <http://esse21.usra.edu/ESSE21>

Activities: College and University Earth System Science Education Program [A133]

B14. Earth System Science Fellowship Program

Description: NASA's Earth System Science (ESS) Fellowship Program sponsors fellowships for students pursuing master of science or doctoral degrees in Earth system science and related disciplines. The program's purpose is to ensure continued training of interdisciplinary scientists to support the study of Earth as a system.

Lead: Dr. Ming-Ying Wei, NASA Headquarters Science Mission Directorate, Washington, DC 20546.
E-mail: ming-ying.wei-1@nasa.gov. Phone: 202-358-0771.

URL: <http://science.hq.nasa.gov/education/catalog/programs/Programs49.html>

Activities: Earth System Science Fellowship Program [A8]

B15. Earth Observing System

EOS

Description: The Earth Observing System (EOS) is a major component of NASA's Earth-Sun System missions. The mission includes a series of satellites, a science component, and a data system supporting a coordinated series of polar-orbiting and low-inclination satellites for long-term global observations of the land surface, biosphere, solid Earth, atmosphere, and oceans. EOS is enabling an improved understanding of Earth as an integrated system. The EOS Project Science Office (EOSPSO) is committed to bringing program information and resources to both program scientists and the general public.

Lead: Dr. Ray Vandiver, Oregon Museum of Science and Industry, 1945 SE Water Ave, Portland, OR 97214-3354.
E-mail: rvandiver@oms.edu. Phone: 503-797-4540.

Contact: Dr. Ray Vandiver, Oregon Museum of Science and Industry, 1945 SE Water Ave, Portland, OR 97214-3354.
E-mail: rvandiver@oms.edu. Phone: 503-797-4540.

URL: <http://eosps0.gsfc.nasa.gov/>

Activities: "Eyes on Earth": Traveling Exhibit Tour [A342]

B16. GeoBrain

Description: GeoBrain will mobilize NASA Earth Observing System (EOS) data and information through Web service and knowledge-management technologies for higher education teaching and research. The technologies, based on geo-object and geo-tree concepts, will be implemented in a Web information system that makes huge sets of NASA EOS data and information easily accessible to faculty and students. The system will allow users to dynamically and collaboratively develop interoperable, Web-executable geospatial service modules and models and to run them online against any part of the archived data in order to get back customized information products rather than raw data. George Mason University's Laboratory for Advanced Information Technology and Standards (LAITS) is conducting this innovative project.

URL: <http://geobrain.laits.gmu.edu>

Activities: NASA Earth Observing System (EOS) Higher Education Alliance: EOS Data and Information Services [A12]

B17. Global Learning and Observations to Benefit the Environment

GLOBE

Description: GLOBE (Global Learning and Observations to Benefit the Environment) is a worldwide, hands-on, primary and secondary school-based education and science program. GLOBE is an interagency program funded by the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF), supported by the U.S. Department of State, and implemented through a cooperative agreement between NASA, the University Corporation for Atmospheric Research (UCAR) in Boulder, CO, and Colorado State University in Fort Collins, CO. GLOBE is a cooperative effort of schools in partnership with colleges and universities, State and local school systems, and nongovernmental organizations. Internationally, GLOBE is a partnership between the United States and over 100 countries who manage and support their unique national and regional program infrastructures and activities. The GLOBE Program Office (GPO) develops and supports the worldwide infrastructure for participating schools, scientists, and communities. The GPO staff includes experts in education, science, partnership development, customer service and information, Web site, and database technologies. NASA, NSF, and key members of UCAR and Colorado State University (CSU) management provide high-level policy guidance to the GPO. An external GLOBE international advisory committee (GIAC) is currently being constituted and will consist of leaders in education, science, industry, and public policy. The GIAC will provide advice on strategic international program directions such as helping schools/teachers/students to connect with cutting-edge science

projects, supporting collaborative student research on the environment, identifying regional or community-generated projects of highest priority to the GLOBE community, and suggesting strategies for program growth and long-term program sustainability. Activities at the GLOBE Program Office are guided by a framework document entitled "The Next Generation GLOBE" outlining the program's strategic goals and associated objectives.

Lead: Dr. Teresa Kennedy, University of Idaho, Moscow, ID 83844. E-mail: tkennedy@uidaho.edu. Phone: 208-885-7536.

URL: <http://www.globe.gov/>

Activities: GLOBE Contrail Team [A280]
GLOBE Workshops [A66]

B18. Immersive Earth

Description: Immersive Earth is a program to teach Earth science by creating immersive digital planetarium shows covering various aspects of Earth science. The project also has a technology component to create portable theaters to bring the Earth shows to schools and tribal locations around the country, not only at the large museums. Partner institutions include the Houston Museum of Natural Science, the Carnegie Museum of Natural History, the Oregon Museum of Science and Industry, the Lodestar Planetarium, and the Louisiana Arts and Science Museum. Corporate partners include E-Planetarium, Inc.; Home Run Pictures; Elumenati; Avela Corp.; Sky-skan; and IMove.

Lead: Dr. Patricia Reiff, Rice University, Physics and Astronomy, 6100 Main Street, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Kerry Handron, Carnegie Museum of Natural History, Earth Theater, Pittsburgh, PA 15213.
E-mail: HandronK@CarnegieMNH.Org. Phone: 412-578-2580.

URL: <http://earth.rice.edu>

Activities: Earth Science Planetarium Shows [A341]
Immersive Earth: Conference Demonstrations [A79]
Immersive Earth: Demonstrations for Education Professionals [A80]
Immersive Earth: Public Outreach and Education [A413]
Immersive Earth: School Presentations [A292]
Immersive Earth: Web-Based Education [A475]
Magnetospheric MultiScale (MMS): Underserved Minority Student Presentations [A297]
Teacher Courses in Master of Science Teaching Program [A162]

B19. Measuring Vegetation Health

Description: Plants are like "green canaries"-if they die, then other organisms will likely follow. By measuring the health of plants, we are measuring the environmental conditions that affect all nearby organisms, including humans. Modern technologies let us monitor plant health using the proportions of light reflected from leaves. Combining these data with our understanding and observations of plant behavior and physiology helps us to quickly assess the quality of the local environment. "Measuring Vegetation Health" brings together biology, physics, chemistry, technology, art, engineering, and math in a project that predominantly supports field studies in middle to high school and self-guided education in environmental science. Many tools such as free software and ideas for activities and student challenge questions are provided on this Web site.

Activities: "Measuring Vegetation Health": Courses [A221]
"Measuring Vegetation Health": Educator Workshops [A91]
"Measuring Vegetation Health": Exhibits and Programs [A479]

B20. Mentoring and inquiry using NASA Data on Atmospheric and Earth science for Teachers and Amateurs

MY NASA DATA

Description: Our team is dedicated to making NASA Earth science data easily accessible to the K-12 and citizen-scientist communities. Mentoring and inquiry using NASA Data for Atmospheric and Earth science for Teachers and Amateurs (MY NASA DATA) is a project to enable K-12 teachers and students, as well as citizen-scientists, to explore the large volumes of data that NASA collects about Earth from space. Students use scientific inquiry and math skills as they access and display microsets of the Earth system. A microset is a small amount of data- perhaps a single parameter for the whole globe or a time series for a single location- extracted from a much larger data file. It is in a simple format, such as plain text, or accessible through a user-friendly tool. MY NASA DATA microsets are primarily made from data holdings of the Atmospheric Science Data Center (ASDC) at NASA Langley Research Center in Hampton, VA, and other sources. While the primary focus of these data is Earth's atmosphere, some information on Earth's surface and land cover is also available. Most of the data are global, at a typical resolution of 1° in latitude and longitude. Microsets are NOT high-resolution images.

Lead: Dr. Lin Chambers, NASA Langley Research Center, MS 420, Hampton, VA 23681.
E-mail: l.h.chambers@larc.nasa.gov. Phone: 757-864-4371.

URL: <http://mynasadata.larc.nasa.gov>

Activities: MY NASA DATA [A222]

B21. New York City Research Initiative

NYCRI

Description: The New York City Research Initiative (NYCRI) is sponsored by the NASA Education Office. Currently, 30 NYCRI research teams are assigned to 12 colleges in the New York City metropolitan area and at the NASA Goddard Institute for Space Studies (GISS). Summer Research Institute Component: Teams of high school and under-

graduate students and faculty work alongside graduate students and the Principal Investigators (lead scientists) of NASA-funded research projects at universities within a 50-mile radius of New York City (in New York, New Jersey, and Connecticut) or at GISS under the mentorship of a GISS scientist. Summer enrichment experiences include content and research seminars; team oral research reports; visits to various research laboratories and informal education institutions; participation in local and national research conferences; and a final research summit with participants from other government agencies, such as the National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), the United States Department of Education (USDE), and the United States Department of Defense (DOD). Academic Year Component: NYCRI high school and college faculty formulate and implement NASA research-based learning units in existing science, technology, engineering, and mathematics (STEM) courses. NASA, NSF, and university partners offer content, research, and teacher preparation/enhancement seminars. Informal education seminars are provided by institutions such as the American Museum of Natural History, the Hayden Planetarium, the Intrepid Air and Space Museum, the Wildlife Conservatory Society (WCS) at the Bronx Zoological Park, and Brookhaven National Laboratories and various science centers, as well as by NASA aerospace and other education specialists.

Activities: New York City Research Initiative (NYCRI): 2005 Summer Research Institute [A23]
 New York City Research Initiative (NYCRI): Academic Year Component [A24]
 New York City Research Initiative (NYCRI): Enrichment Experience at the Hayden Planetarium [A25]
 New York City Research Initiative (NYCRI): Final Research Conference [A26]

B22. Odyssey of the Mind

OM

Description: Odyssey of the Mind (OM) is an international educational program that provides creative problem-solving opportunities for students from kindergarten through college. Kids apply their creativity to solve problems that range from building mechanical devices to presenting their own interpretation of literary classics. They then bring their solutions to competition on the local, State, and world levels. Thousands of teams from throughout the United States and from about 25 other countries participate in the program. NASA's EOS Project Science Office has been a sponsor of OM since 1999.

Activities: Odyssey of the Mind [A310]

B23. Satellite Observations in Science Education

Description: The purpose of this program is to develop an Internet-based education environment that provides interactive learning activities teaching remote sensing principles and exploratory data analysis. A major goal for this project is to build a toolkit of Reusable Content Objects, or RCOs, and Reusable Evaluation Objects, or REOs.

URL: <http://www.ssec.wisc.edu/sose/>

Activities: Satellite Observations in Science Education [A231]

B24. Students' Cloud Observations On-Line

S'COOL

Description: S'COOL-Students' Cloud Observations On-Line-is a project that involves school children in real science. They provide ground truth measurements to assist in the validation of the Clouds and the Earth's Radiant Energy System (CERES) instrument. They can also compare the surface- and space-based observations to learn more about clouds and climate. S'COOL is a joint project of the Atmospheric Science Competency, the Atmospheric Science Data Center (ASDC), and the Office of Education at NASA Langley Research Center.

URL: <http://asd-www.larc.nasa.gov/SCOOL/groundtruth.html>

Activities: Students' Cloud Observations On-Line (S'COOL) [A318]

B25. Virtual Interactive Environmental Worlds

3D-VIEW

Description: An exciting, interactive, science and technology classroom-based initiative with professional development, Project 3D-VIEW (Virtual Interactive Environmental Worlds) engages students in Earth science and Earth system science with immersive 3-D views. The program combines NASA mission data with 3-D technologies in grades 5 and 6 as students become "explorers" while working in five units: "Lithosphere," "Hydrosphere," "Biosphere," "Atmosphere," and "Earth Systems." A goal of the project is for students to understand Earth system science topics and courses and science-based decisionmaking in high school and beyond. Using simple Web interfaces and a custom viewer, students explore, create, manipulate, and navigate 3-D stereo views. 3D-VIEW is aimed at increasing student achievement in middle school science by using 3-D technology to help students to fully understand abstract concepts.

Lead: Mr. Glen Schuster, U.S. Satellite Laboratory, Rye, NY 10580. E-mail: gschuster@us-satellite.net. Phone: 914-921-5920.

Contact: Ms. Meghan Marrero, U.S. Satellite Laboratory, Rye, NY 10580. E-mail: mmarrero@signalsofspring.net. Phone: 914-921-5920.

URL: <http://www.3dview.org>

Activities: 3D-VIEW [A168]

3D-VIEW (Virtual Interactive Environmental Worlds): Student Involvement [A262]

3D-VIEW: Formal Research/Evaluation [A169]

SPACE SCIENCE PROGRAMS AND PARTNERSHIPS

Grants Programs

B26. Initiative to Develop Education through Astronomy and Space Science

IDEAS

Description: The IDEAS grant program is administered by the Space Telescope Science Institute (STScI) on behalf of NASA's SMD. As part of the overall E/PO program, the IDEAS grant program provides startup funding for innovative, creative education and public outreach projects that feature active collaboration between astronomers/space scientists and formal education/informal education professionals. Through this effort, the IDEAS objective is to enhance science, mathematics, and/or technology education in the United States for K–14 students, teachers, and the general public by promoting partnerships that explore new ways to translate astronomy and space science into contexts that will educate and stimulate the interest of people in those groups. There is a formal panel review of all accepted IDEAS grant program proposals. Each team provides an assessment of the group of proposals assigned as well as recommendations for funding. Based on the team's information, the allocation committee at STScI makes final awards. For IDEAS 2001, the program drew 53 proposal submissions from 25 States and 1 U.S. territory. Thirteen proposals were accepted for funding. A two-phased retrospective of the IDEAS grant program took place between July 2002 and September 2003. In Phase 1, an external panel concluded that the processes used by the IDEAS grant program were designed to be effective and efficient and that IDEAS had evolved to become a national model. The panel also reaffirmed that the IDEAS grant program played a role within the context of NASA space and Earth science E/PO goals and objectives. Furthermore, the panel agreed that IDEAS was useful as a test bed for innovative projects that fall outside other NASA science-driven education and public outreach funding opportunities.

Lead: Ms. Bonnie Eisenhamer, Space Telescope Science Institute, Office of Public Outreach, 3700 San Martin Drive, Baltimore, MD 21218. E-mail: bonnie@stsci.edu. Phone: 410-338-4798.

URL: <http://ideas.stsci.edu/>

Activities: Exploring Our Solar Neighborhood [A57]
K–4 Math and Astronomy Through Hands-On Projects [A216]
Quasars and Supermassive Black Holes [A484]
SOAR: Student Opportunities with Astronomy Resources [A235]
Space Vision [A110]
The Dragon Ate What? From Dragons to Eclipses: Improving Girl Scouts' Appreciation of Astronomy [A500]
Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K–14 Education and Public Outreach [A520]

B27. Minority Institution Initiative

MI Initiative

Description: The Science Mission Directorate and Office of Education Minority University Education and Research Partnership Initiative in Space Science is a grant program with the long-term goals of enhancing minority college and university participation in space science and increasing the understanding of science, technology, and the role of research in contemporary society in a broad and diverse segment of the American population. It emphasizes partnerships among SMD, the space science research community, and minority institutions. During FY 2003, 15 projects were funded under this initiative, including 6 at HBCUs, 3 at HSIs, 3 at TCUs, and 3 at other minority institutions. Collectively, they were engaged in research collaborations with 10 NASA space science missions or suborbital projects and more than 50 working partnerships with major space science research groups. In academic programs, they established on their campuses 25 new or redirected space science faculty positions, 11 new or revised space science degree programs, and 67 new or revised space science courses. They also engaged in a wide variety of teacher training, precollege outreach, and public outreach programs that serve constituencies in their local communities.

Lead: Dr. Larry Cooper, Ohio Aerospace Institute, 22800 Cedar Point Road, Cleveland, OH 44142.

Activities: A Space Science Outreach Program Directed Toward Underrepresented Groups [A387]
Employing Planetary Astronomy to Inspire Undergraduates in Southern California's Inland Empire [A14]
Graduate Space Science Education and Disturbed Solar Wind Effects on Earth's Environment [A17]
Initiative to Enhance Space Science Education and Research at Norfolk State University [A18]
Magnetospheric MultiScale (MMS): Underserved Minority Student Presentations [A297]
New Directions in Astronomy and Astrobiology [A22]
New York City Space Science Research Alliance-Phase II [A27]
Partnership for a Sustainable Space Science Program at the University of the District of Columbia in Collaboration with the Catholic University of America [A28]
Partnerships in Astronomy and Astrophysics Education and Research at Southern University [A29]
Space Science Minor at Hampton University [A30]
Synergetic Education and Research for Equipping NASA Space Scientists and Engineers [A34]
Teacher Courses in Master of Science Teaching Program [A162]
Toward a Comprehensive Space Science Program at Fisk University: Curriculum Development, Research Partnerships, and Outreach Activities [A35]
Workshop on Topics in Modern Astronomy [A128]

B28. Supporting Research and Technology**SRT**

Description: The NASA SMD SRT Program provides grants for basic research, instrument development, and data analysis for Earth and space science missions. Each grantee also has the opportunity to propose a supplementary E/PO project to be conducted in conjunction with the research project. The outcomes of the funded E/PO projects are reported here.

Lead: Dr. Larry Cooper, NASA Headquarters Science Mission Directorate, NASA Headquarters, Washington, DC 20546.
E-mail: Larry.P.Cooper@nasa.gov. Phone: 202-358-1531.

URL: <http://spacescience.nasa.gov/education/scientists/index.htm>

Activities: A Regional Center of Excellence in Astronomy Education [A36]
 "Ask a Physicist" [A450]
 "Ask an Astrophysicist" [A451]
 Asteroids Arrive in the Classroom [A41]
 Auroral Structure and Dynamics [A171]
 "Beginnings: Stars, Planets, and Life" [A457]
 Bringing the Multiwavelength Milky Way to the Classroom: An Inquiry-Based Program [A172]
 Caution: Asteroids Ahead: Understanding Near-Earth Objects and the Hazards They Might Pose to Earth [A173]
 Developing a District-Wide Elementary-University Space Science Education Partnership [A135]
 Developing New High School Hands-On and Computer-Based Curricular Modules on the Nature of Comets, Dust in the Solar System, the Kuiper Belt, and the Oort Cloud [A185]
 Discovering the Unseen with Ultraviolet Light [A340]
 Education and Public Outreach to Rural Areas [A467]
 Essex-Stevens Model: Access to Space Science Research Opportunities [A15]
 Exploration of the Solar System: A New View of Jupiter [A137]
 Exploring Astrobiology: A Penn State-University of Puerto Rico Initiative [A16]
 Exploring Icy Worlds [A56]
 "Exploring the Planets: A Tour of Other Worlds" [A194]
 Future Astronomy: The Infrared Universe [A60]
 Graduate Student Researchers Program (GSRP) [A9]
 Hands-On Astronomy for Elementary and Middle School Teachers in Rural North Carolina [A73]
 How Good Is "Good Enough?": Engineering and Other Tradeoffs and Remote Sensing Data [A345]
 Imaging Neptune [A138]
 In-Class Multimedia Programs in Support of the Space Weather Planetarium Show [A214]
 Lunar and Planetary Institute (LPI): Educator Field Experiences [A143]
 Meteorite Museum Renovation and Associated Outreach Activities at the University of New Mexico [A361]
 National Center for Atmospheric Research (NCAR) High-Altitude Observatory: Teachers-in-Residence Program for K–12 Outreach [A149]
 New Investigator Program (NIP) in Earth Science [A4]
 Project Spectra: Exploring Planets and Their Atmospheres Using Spectroscopy [A230]
 Public Outreach and Education with Meteorites Involving a Museum Exhibit [A368]
 Radio, Print, and Internet Educational Outreach for NASA-Sponsored Research on Model Atmospheres and Chemical Evolution [A485]
 Sagan/Haskin Fellowships [A5]
 Science Education Gateway/National Virtual Observatory [A487]
 Searching for Life in an Antarctic Lake Without Leaving Chicago [A369]
 Seeing, Measuring, and Researching the Turbulent Sun (SMARTS) [A314]
 Solar System Impacts: A Suite of Computer-Generated Visualizations [A372]
 Solar System Radio Explorer Kiosk [A373]
 Space Sciences for the "Physics First" Curriculum [A246]
 Space Weather and Its Effects on Earth and Jupiter [A374]
 Space Weather Sounds Scavenger Hunt (SWSSH) [A247]
 Spitzer Space Telescope: Workshops and Activities for K–12 Teachers [A112]
 StarDate Guide to the Solar System [A493]
 StarDate/Universe Radio Programs on Magnetic Fields and Exploding Stars [A494]
 "Stardust, Supernovae, and Earth . . . Oh My!" [A159]
 Stellar Mysteries, Stellar Detectives [A249]
 Student Nitric Oxide Explorer Guest Investigator: Modeling and Observations of Solar Influences on Thermospheric Nitric Oxide [A252]
 Study of Variable Stars as a Pathway to Teaching Physical Science for Middle and High School Teachers [A160]
 Sun-Earth Connection: Presentation and Inquiry Resources for Scientists in K–12 Classrooms [A498]
 Teacher Training Through Research and Public Understanding of Cosmology [A119]
 Telescience in Museums: Linking Learners to a Life-Seeking Desert Rover [A375]
 "The Aliens Answer!" A Full-Dome Exobiology Theater Show [A376]
 "What Are Astronomers Doing?" An Internet and Interactive Museum Kiosk for Educational Outreach [A377]
 "What's New on the Outer Planets?" [A505]
 White Dwarfs and the Age of Our Galaxy: A Professional Development Experience for Teachers [A127]
 "Windows to the Universe" [A260]

Major Partnerships

B29. Adler Center for Space Science Education

Description: The Center for Space Science Education at the Adler Planetarium and Astronomy Museum serves as a nexus between the research and education communities. Its goal is to bring a broad program of astronomy and space science education to the half-million annual visitors to the museum and reach beyond the traditional museum setting to provide educational support for students, teachers, and families.

URL: <http://www.adlerplanetarium.org>

Activities: "Secrets of Saturn" Sky Show [A370]

B30. Space Science Outreach Activities

Description: In keeping with our education outreach goal of "enhancing the quality of education," SMD participates in a number of educational and outreach activities at both the regional and national levels. SMD supports a number of regional and national education conferences attended by thousands of educators in math, science, and technology. SMD supports various professional conferences attended by thousands of scientists from all fields of space science. The activities at these conferences usually entail showcasing an exhibit, distributing educational and outreach material (litho sets, posters, educator guides, strategic plans, etc.), conducting educational workshops, giving keynote speeches, highlighting various space science Web sites, and having NASA employees and scientists answer questions about space science. Finally, SMD staff members participate in more localized events such as conducting talks in local classrooms.

Lead: Ms. Ruth Netting, NASA Headquarters Science Mission Directorate, NASA SMD, Washington, DC 20546.

E-mail: rnetting@hq.nasa.gov. Phone: 202-358-0539.

URL: <http://spacescience.nasa.gov/education>

Activities: Solar System Ambassadors (SSA) Program [A385]

Solar System Ambassadors Training [A381]

B31. Science Center Development

Description: In keeping with our public outreach goal of "sharing the excitement of space science discoveries with the public," NASA supports a number of major development projects at science centers and planetariums across the country. Such projects typically entail the development or renovation of exhibit galleries or planetariums, coupled with the development of new exhibits, shows, and education programs based on the results of recent NASA space science missions and discoveries. These efforts make a substantial contribution to the general public's understanding of science and to communicating to students and the public the new understanding of the universe derived from NASA's space science program.

Lead: Dr. Larry Cooper, NASA Headquarters Science Mission Directorate, Washington, DC 20546.

E-mail: Larry.P.Cooper@nasa.gov. Phone: 202-358-1531.

URL: <http://spacescience.nasa.gov/education>

Activities: Observatory and Planetarium Theater Project [A367]

B32. Passport to Knowledge

P2K

Description: Passport to Knowledge (P2K) is an ongoing series of interactive learning adventures: its mission is to inform and excite young people about basic scientific principles by sharing with them the people, places, and processes of contemporary research. Supported by grants from NASA, the National Science Foundation, NOAA, and other public and private resources, P2K has, since 1993, developed and distributed nearly 100 hours of original science programming via public and NASA TV. "Live From" specials have originated from the South Pole, the Amazon rainforest, and many NASA Centers. Space-related miniseries such as "Live from the Hubble Space Telescope" have included technical and educational firsts, such as the first allocation of actual HST observing orbits to K-12 education. Passport to Knowledge, however, is much more than TV programs: P2K uses an integrated suite of video programs, hands-on activities, and online resources to deliver real science, real scientists, real locations, and real learning. From 1998 through the present, P2K has reformatted the original live specials into customized learning modules, once again including videos, Web sites, and hands-on activities. Projects such as Passport To The Solar System (PTSS) and Science Concepts in Context (SCiC) use comments from NASA scientists and examples from all of the NASA Mission Directorates to place core science concepts in a real-world context. In 2002, P2K added a major grant from NSF's informal science education program to its continuing NASA support to begin the ongoing "To Mars with MER" series (TMwM), which follows the efforts of the MER mission to design, build, launch, fly, and successfully land the twin MER spacecraft on the Red Planet. TMwM features personal stories of the unusually diverse group of men and women behind the mission, which will excite all young Americans, especially those in inner cities and remote rural communities.

Lead: Mr. Geoffrey Haines-Stiles, Passport to Knowledge (P2K), 27 Washington Valley Road, Morristown, NJ 07960.

E-mail: ghs@passporttoknowledge.com. Phone: 973-656-9403.

URL: <http://passporttoknowledge.com>

Activities: "Passport To The Solar System" (PTSS) [A228]

"Science Concepts in Context" [A233]

"To Mars with MER" [A501]

SPACE SCIENCE EDUCATION AND PUBLIC OUTREACH (E/PO) SUPPORT NETWORK

Forums

B33. Astronomical Search for Origins Forum

ASO

Description: The Origins program is the scientific study of the long chain of events involved in the formation of the universe, from the birth of the universe in the Big Bang, to the formation of galaxies, stars, planets, and the chemical elements of life, to the profusion of life on Earth and possibly elsewhere. The overarching program funded by NASA that enables researchers to pursue these questions is called Astronomical Search for Origins and Planetary Systems, or Origins for short. The ASO Forum is the public gateway to the research results, other data and information, and the people behind this quest.

Lead: Dr. Denise Smith, Space Telescope Science Institute, Office of Public Outreach, 3700 San Martin Drive, Baltimore, MD 21218. E-mail: dsmith@stsci.edu. Phone: 410-338-4434.

URL: <http://origins.stsci.edu/>

Activities: Development of GEMS Space Science Core Sequence Curriculum [A186]
 "Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 Mid-Atlantic Planetarium Society (MAPS) Annual Conference [A421]
 NASA Preservice Teacher Conference [A94]
 Origins Education Forum Evaluation Service [A227]
 Origins Education Forum: Workshops/Presentations [A100]
 Preservice Educator Poster Presentation [A516]
 Space Science Education Resource Directory [A244]
 Special Needs Resource Group [A248]
 Special-Needs Initiative [A32]
 Sun-Earth Day-Ancient Observatories [A440]
 Tactile and Technology Focus Group [A257]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K-4 Education and Public Outreach [A520]

B34. Solar System Exploration Forum

SSE

Description: NASA's SSE Forum serves as the entry point and coordinator for E/PO activities and materials related to NASA's Solar System Exploration missions and research activities. Our content includes the planets beyond Earth, comets, asteroids, other planetary bodies, and moons.

Lead: Ms. Leslie Lowes, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109.

E-mail: Leslie.L.Lowes@jpl.nasa.gov. Phone: 818-393-7734.

Contact: Dr. Ellis Miner, NASA Jet Propulsion Laboratory, MS 183-301, 4800 Oak Grove Drive, Pasadena, CA 91109.

E-mail: Ellis.D.Miner@jpl.nasa.gov. Phone: 818-354-4450.

URL: <http://sseforum.jpl.nasa.gov>

Activities: Development of GEMS Space Science Core Sequence Curriculum [A186]
 "Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 Girl Scouts of the USA (GSUSA)-NASA Collaboration [A470]
 "MarsQuest" Planetarium Show [A359]
 Mid-Atlantic Planetarium Society (MAPS) Annual Conference [A421]
 Space Science Education Resource Directory [A244]
 Space Science Workshops for Educators [A109]
 Special-Needs Initiative [A32]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K-14 Education and Public Outreach [A520]

B35. Structure and Evolution of the Universe Forum

SEU

Description: The SEU Forum shares the exciting discoveries and knowledge from NASA's SEU missions and research programs with educators, students, and the general public. The SEU partnership brings together the rich expertise of scientists, science educators, and education researchers to develop innovative products and programs. Our goal is to contribute to the improvement of precollege science education and increase science literacy at all levels, focusing attention on the human quest to understand the universe and our place in the cosmos.

Lead: Dr. Roy Gould, Harvard-Smithsonian Center for Astrophysics, MS 71, 60 Garden Street, Cambridge, MA 02138.

E-mail: rgould@cfa.harvard.edu. Phone: 617-496-7689.

Contact: Ms. Mary Dussault, Harvard-Smithsonian Center for Astrophysics, MS 71, 60 Garden Street, Cambridge, MA 02138. E-mail: mdussault@cfa.harvard.edu. Phone: 617-496-7962.

URL: <http://cfa-www.harvard.edu/seuforum/>

Activities: Astronomy and Space Science Concept Assessment Project [A170]
 Chandra E/PO Grant: After-School Astronomy Project [A378]
 “Cosmic Questions” Professional Development [A50]
 “Cosmic Questions: Our Place in Space and Time” Traveling Exhibition [A337]
 “Cosmic Questions”: Public Outreach Events [A396]
 “Exceptional Space Science Materials for Exceptional Students” Workshop [A192]
 Expanding the Universe in the Classroom: Professional Development DVD [A55]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 “Inside Einstein’s Universe”: Education Outreach Program [A356]
 MicroObservatory Online Telescopes [A305]
 Mid-Atlantic Planetarium Society (MAPS) Annual Conference [A421]
 SEU Forum: Mission Support [A518]
 “SEU: Modeling the Universe Workshop”: An Exploration of Space and Time [A105]
 Space Science Education Resource Directory [A244]
 Space Science for Amateur Astronomers [A491]
 Space Science Workshops for Educators [A109]
 Special-Needs Initiative [A32]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Tactile and Technology Focus Group [A257]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K–14 Education and Public Outreach [A520]
 “You Are Here: Exploring Your Universe from Inner to Outer Space” [A261]

B36. Sun-Earth Connection Education Forum

SECEF

Description: The Sun-Earth Connection Forum shares the exciting discoveries and knowledge from NASA’s SEC missions and research programs with educators, students, and the general public. The SEC partnership brings together the rich expertise of scientists, educators, and museum personnel to develop innovative products and programs. Our goal is to contribute to the improvement of precollege science education and increase science literacy at all levels, focusing attention on the active Sun and its effects on Earth.

Lead: Dr. James Thieman, NASA Goddard Space Flight Center, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: thieman@nssdc.gsfc.nasa.gov. Phone: 301-286-9790.

Contact: Dr. Isabel Hawkins, University of California, Berkeley, MC 7450, Berkeley, CA 94720. E-mail: isabelh@ssl.berkeley.edu. Phone: 510-643-5662.

URL: <http://sunearth.gsfc.nasa.gov>

Activities: Development of GEMS Space Science Core Sequence Curriculum [A186]
 Earth to Sky-An Innovative Partnership: NASA and the National Park Service [A383]
 “Exceptional Space Science Materials for Exceptional Students” Workshop [A192]
 Expanding Your Horizons: Outreach to Girls in Science [A468]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 IMAGE: “Ancient Observatories: Timeless Knowledge” [A77]
 IMAGE: Teacher Workshops and Conferences [A78]
 IMAGE: Webcast [A412]
 Mid-Atlantic Planetarium Society (MAPS) Annual Conference [A421]
 NASA Preservice Teacher Conference [A94]
 Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
 RHESSI: Public Outreach and Informal Education [A424]
 Solar Week [A240]
 Space Science Education Resource Directory [A244]
 Special Needs Resource Group [A248]
 Special-Needs Initiative [A32]
 STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination [A114]
 STEREO: Teacher Professional Development [A115]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Connection Education and Public Outreach Electronic Newsletter [A497]
 Sun-Earth Connection Education Forum (SECEF): Educator Conference Support [A116]
 Sun-Earth Connection Education Forum (SECEF): Formal Education Student Support [A319]
 Sun-Earth Connection Education Forum (SECEF): Informal and Public Outreach [A439]
 Sun-Earth Connection Education Forum (SECEF): Preservice Teacher Education [A117]
 Sun-Earth Connection Education Forum (SECEF): Professional Development-Sharing Sun-Earth Connections with Inservice Teachers [A118]
 Sun-Earth Connection Education Forum (SECEF): Targeted Outreach to Native Americans [A519]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K–14 Education and Public Outreach [A520]
 “You Are Here: Exploring Your Universe from Inner to Outer Space” [A261]

Broker/Facilitators

B37. DePaul University Broker/Facilitator

DePaul B/F

Description: The DePaul B/F assists space scientists and members of the education community in the States of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, and Wisconsin to form partnerships that realize high-leverage opportunities for education and outreach.

Lead: Dr. Carolyn Narasimhan, DePaul University, 1 East Jackson St., Chicago, IL 60604.

E-mail: cnarasim@depaul.edu. Phone: 773-325-1854.

URL: <http://analyzer.depaul.edu/NASABroker/>

Activities: Chicago Teachers' Advisory [A132]

DePaul Broker/Facilitator: "SPACEBUZZ" Electronic Newsletter [A183]

"Exceptional Space Science Materials for Exceptional Students" Workshop [A192]

Expanding the Universe in the Classroom: Professional Development DVD [A55]

Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]

Midwestern Science Teachers Meetings [A93]

Outreach to Native Americans in the Western Region [A102]

"SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]

Space Science for Amateur Astronomers [A491]

Space Science for Midwest Planetariums [A382]

Space Science for the Blind and Visually Impaired [A316]

Space Science Workshops for Minority-Serving Institutions [A31]

Special-Needs Initiative [A32]

Tactile and Technology Focus Group [A257]

Wisconsin Earth and Space Science Network [A166]

B38. South Central Organization of Researchers and Educators

SCORE

Description: The Lunar and Planetary Institute (LPI) provides a bridge between NASA's solar system scientific missions and the academic community. Through LPI, visiting and staff scientists participate in studies of the current state, evolution, and formation of our solar system. Resources at the LPI include a computing center, library, collections of lunar and planetary data, an image-processing facility, and publishing and conference services. The E/PO department focuses on providing access to current findings about our solar system through a variety of programs for the formal and informal education realms. Examples include programs designed to bring space science activities and resources into public and school library settings; planetarium programs exploring space science through Native American legends; educator workshops sharing current solar system research; hands-on classroom activities developed in collaboration with staff scientists; and public outreach events geared toward young children, families, and older students/adults.

Lead: Dr. Stephanie Shipp, Lunar and Planetary Institute, 3600 Bay Area Boulevard, Houston, TX 77058-1113. E-mail: shipp@lpi.usra.edu. Phone: 281-486-2109.

URL: <http://www.lpi.usra.edu/education/score/>

Activities: Community Workshops-Topics in Space Science Education [A462]

South Central Organization of Researchers and Educators (SCORE): State Science Teachers Conferences [A108]

B39. Mid-Atlantic Region Space Science Broker/Facilitator

MARSSB

Description: MARSSB serves as Broker/Facilitator for the following nine States, plus the District of Columbia: West Virginia, Pennsylvania, New York, Delaware, New Jersey, Maryland, Virginia, Kentucky, and Ohio. MARSSB employs three themes to fulfill its role as a Broker/Facilitator: Systemic Reform Through New Strategies, Technology Integration, and Diversity. The Systemic Reform Through New Strategies theme will be addressed by offering online E/PO resources and by developing collaborations with existing systemic reform initiatives. One of the online resources, the Virtual Design Center (VDC), provides a NASA resource for stimulating the development of research-based instructional technology to support classroom activities. The VDC also disseminates new knowledge about how learning theories can be applied to instructional technology and classroom environments. The goal of increasing diversity in space science research and education will be addressed by developing an ongoing dialog and collaboration with MU-SPIN, HBCUs, HSIs, and minority initiatives of the NASA space science support network. The Technology Integration theme is addressed within the context of the Space Science Educational Activities and Training Sites (SSEATS). SSEATS establishes a network of host institutions that offer resources and workshop opportunities to preservice and inservice educators based on SMD missions and facilities, standards-based curriculum materials, and links to other NASA education programs.

Lead: Dr. Laurie Ruberg, Center for Educational Technologies, 316 Washington Avenue, Wheeling, WV 26003.

E-mail: lruberg@cet.edu. Phone: 304-243-2480.

URL: <http://marssb.cet.edu/>

Activities: Broker Services Poster Presentation [A506]

Challenger Learning Center Space Camp [A268]

"Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 MARSSB: NASA Explorer Institute [A511]
 Maryland Science Center SpaceLink Teachers' Thursdays [A90]
 Mid-Atlantic Planetarium Society (MAPS) Annual Conference [A421]
 NASA Balloon Science Workshop [A20]
 NASA Preservice Teacher Conference [A94]
 Preservice Educator Poster Presentation [A516]
 Sally Ride Science Festival [A313]
 Special-Needs Initiative [A32]
 Sun-Earth Day Workshop [A161]
 Testing Ideas About Light [A120]
 West Virginia Eastern Panhandle Regional Science Fair [A329]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K-14 Education and Public Outreach [A520]

B40. New England Space Science Initiative in Education Broker/Facilitator

NESSIE B/F

Description: Founded in January 2002, NESSIE is the Broker/Facilitator for the New England states of Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. NESSIE is charged with catalyzing and fostering collaborations among space scientists and educators within both the formal and informal education communities. NESSIE itself is a collaboration of scientists and science educators at the Museum of Science in Boston, the Harvard-Smithsonian Center for Astrophysics, and Tufts University. Its primary goals are to (1) broker partnerships among space scientists and educators, (2) facilitate a wide range of educational and public outreach activities, and (3) examine and improve space science education methods. NESSIE's unique strengths reside in its prime location (the Museum of Science), its diverse mix of scientists and educators, and its dedicated board of advisers. NESSIE's role as a clearinghouse and facilitator of space science education is being realized through its interactive Web site and via targeted meetings, workshops, and conferences involving scientists and educators. Special efforts are being made to reach underserved groups by tailoring programs to their particular educational needs and interests. These efforts are building on the experiences of prior and ongoing programs in space science education at the Museum of Science, the Harvard-Smithsonian Center for Astrophysics, Tufts University, and NASA.

Lead: Dr. Cary Sneider, Museum of Science, NESSIE, Boston, MA 02114-1099. E-mail: nessie@mos.org.
Phone: 617-589-0227.

Contact: Dr. William Waller, Museum of Science, Education Programs-Boston, MA 02114-1099.
E-mail: wwaller@mos.org. Phone: 617-589-0227.

URL: <http://www.mos.org/nessie>

Activities: Cosmos in the Classroom 2004-Resource Book [A11]
 "Countdown to Supernova" Planetarium Show [A338]
 Current Science and Technology Center [A339]
 "Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
 "Folio of Information for New England Space Scientists in Education (FINESSE)" [A507]
 Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
 "Gravity Rules!" Planetarium Show [A344]
 "Learning About Phases of the Moon and Eclipses: A Guide for Teachers and Curriculum Developers" [A218]
 "Learning About the Earth's Shape and Gravity: A Guide for Teachers and Curriculum Developers" [A219]
 "Mission to Saturn" Planetarium Show [A362]
 "Mysteries of the Milky Way" Planetarium Show [A363]
 NESSIE: Outreach at Professional Conferences [A514]
 New England After-School Programs in Space Science [A308]
 New England Space Scientists in the Classroom [A515]
 New England Workshops in Space Science Education [A95]
 New England Workshops on Effective Electronic Communications for Science Education [A96]
 Public Presentations by New England Space Scientists [A483]
 Redesigning the Milky Way [A486]
 Space Science Education at Public Events in New England [A436]
 Space Science Education in New England Colleges [A158]
 Space Science Workshops for Educators [A109]
 Special-Needs Initiative [A32]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K-14 Education and Public Outreach [A520]

B41. Southeast Regional Clearinghouse Broker/Facilitator

SERCH B/F

Description: SERCH is a NASA space science E/PO program with the purpose of promoting space science awareness and enhancing interest in science, math, and technology through the use of Earth and space science mission

data, information, and educational products. SERCH works closely with 14 Space Grant consortia (Alabama, Arkansas, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, and Virginia) throughout the southeastern United States. SERCH serves as a Broker/Facilitator of services between the region's educational community and researchers involved in SMD missions. The goals of SERCH are to (1) develop a network of educators and researchers interested in space science; (2) be an effective interface between researchers and educators in the area of space science; (3) be a primary information and resource clearinghouse for space science data, information, and educational products; (4) support SMD mission scientists in their educational outreach activities; (5) facilitate the modification of SMD materials to meet the needs of diverse educational environments; (6) be a leader in serving exceptional students and the general public; (7) enhance minority involvement across NASA SMD programs; and (8) develop an accessible, nationwide Geographic Information System (GIS) database that provides spatially related information of targeted NASA educational resources.

Lead: Dr. Cassandra Runyon, College of Charleston, Geology, Charleston, SC 29424. E-mail: cass@cofc.edu. Phone: 843-953-8279.

URL: <http://serch.cofc.edu/serch/>

Activities: "Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
New Directions in Astronomy and Astrobiology [A22]
"SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
Space Science for the Blind and Visually Impaired [A316]
Special Needs Resource Group [A248]
Special-Needs Initiative [A32]
Tactile and Technology Focus Group [A257]

B42. Space Science Institute Broker/Facilitator

SSI B/F

Description: The Space Science Institute (SSI) of Boulder, CO, is home to one of seven regional Broker/Facilitator (B/F) programs that support SMD E/PO efforts. The core mission of B/Fs is to cultivate opportunities and partnerships between the education and space science communities that can address important educational needs in their respective regions. The SSI B/F program now serves a large part of the United States, extending from North Dakota to California (Arizona, California, Colorado, Nebraska, North Dakota, New Mexico, Nevada, South Dakota, and Utah). SSI is building on 4 years of "lessons learned" in the B/F role. The goals of our B/F program are to provide strategically valuable support for (1) space scientists' effective E/PO involvement, (2) formal education (emphasizing State-based agendas), (3) informal education (emphasizing planetarium associations, Girl Scouts, and traveling science exhibits), and (4) underserved populations (emphasizing indigenous and Latino educators). This strategic support includes providing professional development opportunities, facilitating access to and use of exemplary materials, and facilitating E/PO participation and/or partnerships. Key collaborators of the SSI B/F program include leaders from two western planetarium associations, the Girl Scouts' Mile-Hi Council, mobile education programs, traveling exhibit programs, the MESA after-school programs, and E/PO leads at major scientific research institutions in our region. To begin to address the vastness of our region, we are developing new electronic resources (e-brokering) for both scientists and educators.

Lead: Dr. Cheryl Lynn Morrow, Space Science Institute, 4750 Walnut Street, Boulder, CO 80301.
E-mail: camorrow@colorado.edu. Phone: 720-974-5828.

Contact: Ms. Christy Edwards, Space Science Institute, 4750 Walnut Street, Boulder, CO 80301.
E-mail: edwardcl@colorado.edu. Phone: 720-974-5824.

URL: <http://ssibroker.colorado.edu/broker/>

Activities: "Alien Earths" Traveling Exhibit [A335]
Educational Family Guides to the Sun and Mars [A189]
Electronic Newsletter: "Bulletin for Educators in Space Science" ("BESS") [A191]
"Exceptional Space Science Materials for Exceptional Students" Workshop [A192]
Expanding Your Horizons: Outreach to Girls in Science [A468]
Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]
"MarsQuest" Planetarium Show [A359]
"MarsQuest" Traveling Exhibit [A360]
Outreach to Native Americans in the Western Region [A102]
"Regional Opportunities for Scientists in Education" ("ROSIE") [A517]
Space Science Institute: Interactive Exhibits at Community Events [A492]
Space Science Workshops for Educators [A109]
Special-Needs Initiative [A32]
Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K-14 Education and Public Outreach [A520]

B43. Space Science Network Northwest Broker/Facilitator

S2N2 B/F

Description: S2N2 uses a variety of approaches to make formal and informal educators aware of NASA space science programs, materials, and opportunities. S2N2 helps to create sustainable partnerships between formal and

informal educators and NASA SMD missions, forums, and space scientists. S2N2 operates by having a central office at the University of Washington and representatives in the partner States of Washington, Alaska, Hawaii, Oregon, Montana, Idaho, and Wyoming.

Lead: Dr. Julie Lutz, University of Washington, Box 351310, Seattle, WA 98195-1310.

E-mail: nasaerc@u.washington.edu. Phone: 206-616-1084.

Contact: Ms. Darlette Powell, University of Washington, Box 351310, Seattle, WA 98195-1310. Phone: 206-543-0214.

URL: <http://www.s2n2.org>

Activities: "Exceptional Space Science Materials for Exceptional Students" Workshop [A192]

Expanding Your Horizons: Outreach to Girls in Science [A468]

Followup to Chicago 2004: A Workshop to Foster Broader Participation in NASA Space Science Missions and Research Programs [A508]

Northwest Workshops in Space Science Education [A98]

S2N2: Adult Education on Space Science [A425]

S2N2: Amateur Astronomy Partnerships [A426]

S2N2: Informal Space Science Opportunities for Youth [A312]

S2N2: Outreach at Professional Education Conferences [A104]

S2N2: Public Events [A427]

Space Science in K-14 Education and Public Outreach [A520]

ASTROPHYSICS MISSIONS

Major Missions

B44. Chandra X-ray Observatory

CXO

Description: The Chandra X-ray Observatory, the third of NASA's "Great Observatories," has completed its fourth year of science operations. Chandra's superb resolution has enabled never-before-seen images of the X-ray emission from such fascinating cosmic sources as the sound waves produced by a black hole, a pair of black holes orbiting in the nucleus of an active galaxy, and the jets and rings of high-energy particles in the remnants of exploded stars. The goals of the Chandra E/PO program are to increase the public's engagement with NASA space science by conveying the excitement of the Chandra discoveries; promoting science literacy by engaging the imaginations of students, educators, and the public; increasing learning opportunities in science, math, and technology with classroom-ready materials that are aligned with national standards; and providing ready access to Chandra images and educational products. The program maintains an extensive public Web site with images, background materials, and educational products that are downloadable in multiple formats. The Web site is now fully compliant with Americans with Disabilities Act section 508 guidelines for visual impairments. Online forms allow educators to order printed and multimedia resources. Opportunities for educators include summer workshops at Tufts University's Wright Center for Science Education, the Rutgers Astrophysics Summer Institute, programs at national and State teachers' conferences, and the Chandra Teacher Resource Agent Program. Printed materials and a CD containing Chandra images are distributed widely to classrooms, planetariums, and amateur astronomy associations. Classroom-ready materials are downloadable from the E/PO Web site. For greater educational impact, an effort is made to present Chandra images in multiwavelength comparisons. A software program tailored for educational use enables students and teachers to work with actual Chandra data and images.

Lead: Ms. Kathleen Lestition, Harvard-Smithsonian Center for Astrophysics, MS 06, 60 Garden Street, Cambridge, MA 02138. E-mail: klestition@cfa.harvard.edu. Phone: 617-495-7399.

URL: <http://chandra.harvard.edu>

Activities: Big Explosions and Strong Gravity [A266]

Chandra E/PO Grant: 10 Years of the Penn State Inservice Workshops in Astronomy [A46]

Chandra E/PO Grant: A Multiwavelength Astronomy Guide for the Visually Impaired [A174]

Chandra E/PO Grant: After-School Astronomy Project [A378]

Chandra E/PO Grant: Chandra Astrophysics Institute (CAI) [A131]

Chandra E/PO Grant: Does Dark Matter Really Exist? Observational Benchmarks for the Next Generation [A175]

Chandra E/PO Grant: Stellar Evolution Planetarium Show at the Science Museum of Virginia [A336]

Chandra E/PO Grant: The Sun-Earth Connection [A176]

Chandra X-ray Center: Online Education and Outreach [A459]

Chandra X-ray Center: Operation Control Center Tours [A460]

Chandra X-ray Center: Postdoctoral Fellowship Program [A1]

Chandra X-ray Center: Presentations and Workshops for Students [A269]

Chandra X-ray Center: Public Outreach [A461]

Chandra X-ray Center: Teacher Workshops and Presentations [A47]

"Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]

"Cosmic Questions": Public Outreach Events [A396]

"Inside Einstein's Universe": Education Outreach Program [A356]

MIT Center for Space Research: Tours [A386]

"Science Concepts in Context" [A233]

SEU Forum: Mission Support [A518]

B45. Compton Gamma-Ray Observatory

CGRO

Description: CGRO, the second of NASA’s “Great Observatories,” was launched in April 1991. It had a diverse scientific agenda, including studies of very energetic celestial phenomena such as solar flares, cosmic gamma-ray bursts, pulsars, nova and supernova explosions, accreting black holes of stellar dimensions, quasar emissions, and interactions of cosmic rays with the interstellar medium. Compton left a legacy of outstanding science and revolutionized our knowledge of the gamma-ray sky. Its mission ended in June 2000, when it was deorbited following the failure of one of its three gyroscopes.

Activities: “Science Concepts in Context” [A233]

B46. Constellation-X

Description: Constellation-X has been designed to perform x-ray spectroscopy with unprecedented sensitivity and spectral resolution. The measurement of large numbers of x-ray spectral lines in hot plasmas leads to determining the elemental composition, temperature, and velocity of the emitting matter. Astronomers will determine the flow of gas in accretion disks around black holes in active galactic nuclei and in binary x-ray sources, measure the population of newly created elements in supernova remnants, and detect the influence of dark matter on the hot intergalactic medium in clusters of galaxies. Constellation-X is identified in the SMD strategic plan.

Lead: Ms. Barbara Mattson, NASA Goddard Space Flight Center, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: Barbara.J.Mattson.1@gsfc.nasa.gov. Phone: 301-286-1243.

Activities: “Ask an Astrophysicist” [A451]
 Big Explosions and Strong Gravity [A266]
 SEU Forum: Mission Support [A518]

B47. Gamma-ray Large Area Space Telescope

GLAST

Description: GLAST is scheduled for launch in late 2006. With GLAST, scientists hope to explore the limits of gravity and energy in the universe and study nature’s highest energy acceleration processes. The instruments aboard GLAST have an imaging gamma-ray telescope that is vastly more capable than the instruments flown previously, as well as a secondary instrument to augment the study of gamma-ray bursts. The GLAST E/PO group has developed a program to promote inquiry into the origin and structure of the universe and the fundamental relationship between energy and matter, concepts that are included in the Physical Science Content Standards A, B, and D for grades 9–12. The GLAST Telescope Network (GTN) is being designed to provide information to ground-based visible-light telescopes in conjunction with space-based observations of events producing gamma rays, as well as the development of a ground-based imaging and data archive. The GLAST Educator Ambassador Program consists of 10 educators who will work in conjunction with GLAST science and E/PO team members at SSU and the Stanford Linear Accelerator (SLAC) to develop workshops and curriculum materials. Many printed materials are being developed, including TOPS lesson modules and posters accompanied by educator guides. The GLAST E/PO group also maintains a public-oriented Web site that includes an “Ask a Scientist” feature. Among future programs is an Interactive Gamma-Ray Detector Exhibit under development at Stanford Linear Accelerator’s Virtual Visitor Center and additional Space Mysteries, interactive video games that teach physical science and mathematics. Also in development with Thomas Lucas Productions is a “NOVA” or Public Broadcasting Service (PBS) special that takes a sweeping look at high-energy astrophysics.

Lead: Dr. Lynn Cominsky, Sonoma State University, Department of Physics and Astronomy, 1801 East Cotati Avenue, Rohnert Park, CA 94928. E-mail: lynncc@charmian.sonoma.edu. Phone: 707-664-2655.

URL: <http://glast.gsfc.nasa.gov>

Activities: “A Swift View of the Universe” Presentation [A388]
 “Cosmic Questions: Our Place in Space and Time” Traveling Exhibition [A337]
 “Cosmic Questions”: Public Outreach Events [A396]
 “Exploring the Extreme Universe!” Student Presentations [A272]
 GLAST: Mission Sticker [A197]
 GLAST: Public Presentations [A403]
 GLAST: Tasty Active Galaxy Activity [A198]
 GLAST: The High-Energy Classroom Teacher Workshops [A64]
 Initiative to Enhance Space Science Education and Research at Norfolk State University [A18]
 “Inside Einstein’s Universe”: Education Outreach Program [A356]
 Scale the Universe [A232]
 SEU Forum: Mission Support [A518]
 “SEU: Modeling the Universe Workshop”: An Exploration of Space and Time [A105]
 Workshop on Topics in Modern Astronomy [A128]
 “You Are Here: Exploring Your Universe from Inner to Outer Space” [A261]

B48. Gravity Probe B Relativity Mission

GP-B

Description: GP-B is producing and distributing educational materials that communicate the science and technology related to the mission, including Einstein’s General Theory of Relativity. In addition, GP-B is participating in conferences

and workshops to teach students, teachers, and the general public about GP-B. Materials include posters, an educator's guide, lithograph sets, a DVD video, and brochures. Most materials are available on the GP-B Web site. Additionally, the GP-B Web site is developing a "Spacetime and Relativity" section to introduce and educate users about these concepts.

Lead: Ms. Shannon Range, Stanford University, HEPL 4085, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.
Contact: Ms. Shannon Range, Stanford University, HEPL 4085, Stanford, CA 94305. E-mail: range@relgyro.stanford.edu.
Phone: 415-867-4689.

URL: <http://einstein.stanford.edu>

Activities: Conference Presentations of Einstein's Curved Space-Time and Gravity Probe B [A48]
"Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]
"Cosmic Questions": Public Outreach Events [A396]
Einstein and GP-B in the Classroom [A271]
Gravity Probe B: Mission Operations Control Tours [A408]
"Inside Einstein's Universe": Education Outreach Program [A356]
SEU Forum: Mission Support [A518]
"SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
Testing Einstein's Universe Exhibit [A499]

B49. Hubble Space Telescope

HST

Description: The Office of Public Outreach at the STScI was created to share the amazing discoveries of the Hubble Space Telescope with the American public. We are privileged to be the focal point of public attention for a storied NASA European Space Agency (ESA) space science mission to which thousands of engineers, programmers, technicians, administrators, and scientists have devoted their professional gifts. We have developed a multitude of products and programs that have capitalized on the intense interest in Hubble to inform and inspire millions of Americans and many others around the globe.

Lead: Dr. Bruce Margon, Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218. E-mail: margon@stsci.edu. Phone: 410-338-4459.

URL: <http://hubblesite.org/>

Activities: "Alien Earths" Traveling Exhibit [A335]
"Cosmic Questions": Public Outreach Events [A396]
Development of GEMS Space Science Core Sequence Curriculum [A186]
Earth and Space Science Education Product Workshop [A54]
Hubble Space Telescope: 15th Anniversary Celebration [A346]
Hubble Space Telescope: "Amazing Space" [A200]
Hubble Space Telescope: Cycle Education and Public Outreach Grant Program [A509]
Hubble Space Telescope: "Heavens Above" Traveling Exhibit [A347]
Hubble Space Telescope: "Hubble: Galaxies Across Space and Time," an IMAX Short Film [A348]
Hubble Space Telescope: HubbleSource Video Collection [A349]
Hubble Space Telescope: Immersive Dome Visualizations for Planetariums [A350]
Hubble Space Telescope: International Planetarium Society Slide Service [A351]
"Hubble Space Telescope: 'New Views of the Universe II'" Traveling Exhibit [A352]
Hubble Space Telescope: Online Broadcast-Quality Hubble Video Clip Library [A353]
Hubble Space Telescope: Postdoctoral Fellowships [A2]
Hubble Space Telescope: Speaker's Bureau [A409]
Hubble Space Telescope: "ViewSpace" [A354]
Hubble Space Telescope: Workshops and Presentations [A472]
In Search of Interacting Galaxies [A213]
Life in Space: An Astronomy/Astrobiology Unit for Upper Elementary and Middle School Students [A220]
"Science Concepts in Context" [A233]
Space Science Workshops for Educators [A109]
Space Telescope Science Institute: Open Night [A437]
Telescopes from the Ground Up [A258]
"What's New on the Outer Planets?" [A505]
Whirlpool Galaxy (M51) and Companion Galaxy Lithograph [A259]

B50. Kepler

Description: The Kepler mission E/PO includes formal education elements like GEMS teacher guides, teacher workshops, "Hands-on Universe" high school activities, and KeplerCam charge-coupled device (CCD) cameras for colleges; informal education elements like planetarium shows, museum exhibits, and public events; and public outreach elements like a public video program, Stardate radio programs, and amateur astronomer's kits.

Lead: Mr. Alan Gould, Lawrence Hall of Science, MC 5200, Berkeley, CA 94720-5200.
E-mail: agould@uclink4.berkeley.edu. Phone: 510-643-5082.

Contact: Dr. Edna DeVore, Search for Extraterrestrial Intelligence (SETI) Institute, 2035 Landings Drive, Mountain View, CA 94043.

URL: <http://www.kepler.arc.nasa.gov/>

Activities: "Alien Earths" Traveling Exhibit [A335]
Development of GEMS Space Science Core Sequence Curriculum [A186]

Kepler: Exhibits for Museums and Classroom Demos [A357]
 Kepler: Paper Model Spacecraft [A217]
 Kepler: Presentations by Scientists and Engineers [A510]
 Kepler: Teacher Workshops on Planet Finding [A82]
 Space Science Workshops for Educators [A109]
 Sun-Earth Day/Timeless Knowledge [A440]

B51. Laser Interferometer Space Antenna

LISA

Description: The Space Place has involved LISA in various events/activities. We attend conferences to promote Space Place and all of the projects involved with the Web site. Usually, mission- or Space Place related items are passed out. Libraries, science museums, planetariums, zoos, and aquariums across the United States have formed "Club Space Place" partnerships with NASA. They get Space Place, provided display materials, an activity guide, and handouts for an original group activity. Through these partnerships, we promote the Space Place Web site and NASA missions. Club Space Place provides quarterly interdisciplinary hands-on activities that are space- or Earth science, related. These quarterly activities go to the Space Place library and museum partners, Boys & Girls Clubs of America, the YWCA, and the Civil Air Patrol. Currently, there are 272 partners reaching thousands of children. On a monthly basis, Space Place provides articles for over 20 newspapers nationwide in both English and Spanish. The combined readership of these newspapers adds up to more than 2.5 million. The articles always end with information on activities and links to the Space Place Web site and SMD mission Web sites. Diane Fisher submits articles to "Technology and Children" magazine four times a year and to "The Technology Teacher" magazine eight times a year. Each article published under the Space Place header refers to a particular mission. Each "Technology and Children" publication reaches an estimated 1,400 teachers and their students (possibly 42,000 children), and each "The Technology Teacher" publication reaches an estimated 8,000 teachers and their students (possibly 224,000 children). Each article is also posted on ITEA's Web site, which reaches an even wider audience. The dynamic Space Place Web site offers interactive experiences and fun facts for children and adults. The Space Place is supported by the New Millennium Program. It reaches an average of 3,000 Web users per day.

Lead: Ms. Nancy Leon, NASA Jet Propulsion Laboratory, M/S 171-350, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Nancy.J.Leon@jpl.nasa.gov. Phone: 818-354-1067.

URL: <http://spaceplace.nasa.gov>

Activities: Laser Interferometer Space Antenna (LISA) Educator Ambassador Workshop [A84]
 SEU Forum: Mission Support [A518]
 Space Place: Conferences [A241]
 Space Place: Web Site [A243]

B52. Spitzer Space Telescope

SST

Description: The Spitzer Space Telescope E/PO program strives to address NASA's goals of reaching a wide audience and inspiring the next generation of explorers. Our formal education initiative includes a fully accredited online course that teachers may take for continuing education credit or as part of a master's degree in science education. We also offer short courses at all National Science Teachers Association (NSTA) meetings and regional State teacher meetings. In the informal education realm, we are developing a series of ViewSpace presentations, which reach over 100 planetariums and science museums. We are also part of a collaboration on a new traveling museum exhibit on the Origins programs that will debut in 2005. This year saw multiple articles and television segments about our launch and successful startup, and we are addressing the challenge of getting new science and educational materials out to the public as soon as possible.

Lead: Dr. Michelle Thaller, California Institute of Technology (Caltech), 1200 East California Boulevard, Pasadena, CA 91125. E-mail: thaller@ipac.caltech.edu. Phone: 626-395-8670.

URL: <http://sirtf.caltech.edu>

Activities: Active Astronomy: Classroom Activities for Learning About Infrared Light [A38]
 "Alien Earths" Traveling Exhibit [A335]
 Chandra E/PO Grant: A Multiwavelength Astronomy Guide for the Visually Impaired [A174]
 Development of GEMS Space Science Core Sequence Curriculum [A186]
 Navigator: Center for Astronomy Education [A13]
 Space Place: Contributions to Newspapers [A490]
 Space Place: Web Site [A243]
 Space Science Workshops for Educators [A109]
 Spitzer Space Telescope Conference Support [A438]
 Spitzer Space Telescope Educator Workshops [A111]
 Stellar Mysteries, Stellar Detectives [A249]

B53. Stratospheric Observatory For Infrared Astronomy

SOFIA

Description: SOFIA will consist of a specially modified Boeing 747-SP aircraft carrying a 2.5-meter telescope designed to make sensitive infrared measurements of a wide range of astronomical objects. SOFIA will be a premier observatory for infrared and submillimeter astronomy for the next two decades. SOFIA's E/PO program contributes to the improvement of America's public scientific, mathematical, and technological literacy and greater awareness

of the value of scientific research. SOFIA was designed from the beginning with the capability to allow visiting educators and journalists to observe and participate in the research process. SOFIA's E/PO program will bring the excitement, challenges, discoveries, teamwork, and educational value of the observatory's research to teachers, students, and the general public on a national and international scale. SOFIA E/PO programs include (1) Airborne Astronomy Ambassadors-trained educators who will fly on research missions and compose a national network of master educators who conduct teacher workshops and public presentations; (2) Education Partners Program-SOFIA scientists, instrument builders, engineers, technicians, flight crew, and educators who will partner with teachers in their local communities; (3) Science Literacy and Education Program-symposia at NASA Ames Research Center for undergraduate instructors, science and technology center staff, and planetarium directors; and (4) SOFIA Visiting Educators-a small number of experienced educators who will join the SOFIA E/PO staff for 1-year stints as flight facilitators and outreach personnel. The E/PO program will support a public affairs team that works with the NASA Office of Public Affairs to communicate SOFIA science effectively. SOFIA will be operated for NASA and the German space agency DLR by Universities Space Research Association (USRA). The E/PO program is jointly conducted by the SETI Institute, the Astronomical Society of the Pacific (ASP), and members of the USRA SOFIA team.

Lead: Dr. Dana Backman, NASA Ames Research Center, MS 211-3, Moffett Field, CA 94035.

E-mail: dbackman@mail.arc.nasa.gov. Phone: 650-604-2128.

URL: <http://sofia.arc.nasa.gov>

Activities: Active Astronomy: Classroom Activities for Learning About Infrared Light [A38]
Aeronautical Exposition for Students [A264]
Air Expo for the Public [A448]
"Alien Earths" Traveling Exhibit [A335]
"Astronomy at 41,000 Feet-The Story of SOFIA" [A452]
Electromagnetic Radiation, Astronomy, and SOFIA (for Students with Visual Impairments) [A190]
Electromagnetic Radiation, Infrared Astronomy, and SOFIA (Yerkes Observatory) [A400]
Infrared Radiation, Infrared Astronomy, and SOFIA [A215]
Project ASTRO in Bubb Elementary School, Mountain View [A155]
"Science Concepts in Context" [A233]
SOFIA, SETI, and Kepler: Conference Exhibit Booth [A106]
SOFIA: Conference Exhibit Booth (Scientific Conferences) [A488]
SOFIA: E/PO Conference Posters [A429]
SOFIA: Material Distribution [A236]
SOFIA: Newsletter Distribution [A237]
SOFIA: Public Events [A430]
SOFIA: Tour of the SOFIA Science Mission Operations Center (SSMOC) and SOFIA Hangar [A431]
SOFIA: Tours of the Kuiper Airborne Observatory (KAO) Interior [A432]
Space Science Workshops for Educators [A109]

Explorers

B54. Cosmic Hot Interstellar Plasma Spectrometer

CHIPS

Description: CHIPS uses an extreme ultraviolet spectrograph during its mission to study the "Local Bubble," a tenuous cloud of hot gas surrounding our solar system that extends about 300 light-years from the Sun. The million-degree gas in this region is thought to be generated by supernovae and stellar winds from hot, young stars. But the origins and cooling mechanisms of the gas in the Local Bubble still need to be understood. CHIPS, the first University Class Explorer (UNEX), was launched in January 2003. The CHIPS E/PO program has developed classroom materials and lessons focusing on the fundamental physics concepts behind the mission. These are disseminated through teacher workshops, public events, NASA education networks, and a Web site.

Lead: Dr. Nahide Craig, University of California, Berkeley, MC 7450, Berkeley, CA 94720.

E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

Contact: Dr. Bryan Mendez, University of California, Berkeley, MC 7450, Berkeley, CA 94720.

E-mail: bmendez@ssl.berkeley.edu. Phone: 510-643-2178.

URL: http://cse.ssl.berkeley.edu/chips_epo/

Activities: Cosmic Hot Interstellar Plasma Spectrometer (CHIPS): Classroom Visits and Student Support [A270]
Cosmic Hot Interstellar Plasma Spectrometer (CHIPS): Teacher Professional Development [A49]
"Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]
NASA Balloon Science Workshop [A20]
Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
RHESSI: Public Outreach and Informal Education [A424]
SEU Forum: Mission Support [A518]
"SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination [A114]

B55. Galaxy Evolution Explorer

GALEX

- Description:** The Space Place has involved GALEX in the following events/activities. We attend conferences to promote Space Place and all of the projects involved with the Web site. Usually, mission- or Space Place-provided display materials, an activity guide, and handouts for an original group activity. Through these partnerships, we promote the Space Place Web site and NASA missions. Club Space Place provides quarterly interdisciplinary hands-on activities that are space- or Earth science-related. These quarterly activities go to the Space Place library and museum partners, Boys & Girls Clubs of America, the YWCA, and the Civil Air Patrol. Currently, there are 272 partners reaching thousands of children. On a monthly basis, Space Place provides articles for over 20 newspapers nationwide in both English and Spanish. The combined readership of these newspapers adds up to more than 2.5 million. The articles always end with information on activities and links to the Space Place Web site and SMD mission Web sites. Diane Fisher submits articles to "Technology and Children" magazine four times a year and to "The Technology Teacher" magazine eight times a year. Each article published under the Space Place header refers to a particular mission. Each "Technology and Children" publication reaches an estimated 1,400 teachers and their students (possibly 42,000 children), and each "The Technology Teacher" publication reaches an estimated 8,000 teachers and their students (possibly 224,000 children). Each article is also posted on ITEA's Web site, which reaches an even wider audience. The dynamic Space Place Web site offers interactive experiences and fun facts for children and adults. The Space Place is supported by the New Millennium Program.
- Contact:** Ms. Liliana Novati, NASA Jet Propulsion Laboratory, M/S 171-350, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Liliana.Novati@jpl.nasa.gov. Phone: 818-354-1486.
- URL:** <http://spaceplace.nasa.gov>
- Activities:** GALEX: Universe Teacher Workshops [A61]
Space Place: Web Site [A243]

B56. Rossi X-ray Timing Explorer

RXTE

- Description:** The Rossi X-ray Timing Explorer (RXTE), launched in December 1995, continues to return a stream of impressive results on the physics of matter near sources of extreme gravity (neutron stars, black holes, and the supermassive black hole cores of active galaxies). The mission—a collaboration among NASA's Goddard Space Flight Center, MIT, and the University of California, San Diego—centers on three flight instruments in a low-Earth orbit that investigate the 2-250 kiloelectronvolt (keV) x-ray spectral and milliseconds-to-years timing variability of astronomical sources. Since early in the mission, RXTE has supported an active E/PO program involving the RXTE Learning Center, an online educational resource for teachers and students. RXTE has also hosted teacher interns to design and develop lesson plans and classroom activities based on RXTE results. Recent accomplishments include the All Sky Monitor-based "Tour the X-ray Sky," which uses real data to introduce students to the types of variability seen in x-ray sources, and a series of supporting educator workshops to train teachers on the use of this module in their classroom. During the next 2 years, the RXTE E/PO program will focus on the classroom testing and educator dissemination of a collection of newly developed activities to go with a multimedia RXTE product—"The High Energy Groovie Movie." This movie mates an animation of the x-ray variability of the entire sky over several years of the mission (developed by the All Sky Monitor team at MIT) with a high-energy original pop song, "High Energy Groove" (written and recorded by the Chromatics as part of the AstroCappella project), which describes the basics of modern x-ray astronomy. The activities, which were developed by two Maryland teacher interns in the summer of 2002, cover a range of topics, including the technology behind the PCA detectors, how accretion works in close binary systems, neutron stars and pulsars, active galaxies, and the electromagnetic spectrum.
- Lead:** Dr. Patricia Boyd, NASA Goddard Space Flight Center, Code 662, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: padi@lhea1.gsfc.nasa.gov. Phone: 301-286-2550.
- URL:** http://rxte.gsfc.nasa.gov/docs/xte/learning_center/
- Activities:** "Science Concepts in Context" [A233]

B57. Swift Gamma Ray Burst Mission

Swift

- Description:** The Swift Gamma Ray Burst Explorer is a NASA medium-sized explorer (MIDEX) mission developed by an international collaboration and launched in 2004. Swift is the first of its kind: a multiwavelength observatory dedicated to the study of gamma-ray bursts. The main mission objectives of Swift include determining the origin of gamma-ray bursts, classifying gamma-ray bursts as well as searching for new types, determining how the blast wave evolves and interacts with the surroundings, using gamma-ray bursts to study the early universe, and performing a sensitive survey of the sky in the hard x-ray band. Swift has a complement of three coaligned instruments that study bursts in the gamma-ray, x-ray, ultraviolet, and optical bands. Using prompt burst location information, Swift can slew quickly to point its onboard x-ray and UV/optical instrumentation at the burst for continued afterglow studies. The goal of the Swift mission E/PO at Sonoma State University is to use the observations and scientific discoveries of the Swift mission to improve the understanding and utilization of science and mathematics concepts for grades 7–12. The program, which includes posters accompanied by educator guides, has developed the "Invisible Universe: From Radio Waves to Gamma-rays" in partnership with the GEMS group at the Lawrence Hall of Science. "What's in the News?"—a television show produced by Penn State—informs middle school students across the country about Swift in several different segments that are produced each year. Penn State also offers yearly workshops for science educators that feature Swift and other space-based telescopes. Evaluation and guidance of the development of educational materials comes from the

Swift Education Committee (SwEC) and four Swift Educator Ambassadors, who also help to disseminate Swift's educational materials.

Lead: Dr. Lynn Cominsky, Sonoma State University, Department of Physics and Astronomy, 1801 East Cotati Avenue, Rohnert Park, CA 94928. E-mail: lynn@charmian.sonoma.edu. Phone: 707-664-2655.

URL: <http://swift.gsfc.nasa.gov>

Activities: "A Swift View of the Universe" Presentation [A388]
 "Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]
 "Cosmic Questions": Public Outreach Events [A396]
 Gamma-Ray Burst Skymap Web Site [A196]
 Initiative to Enhance Space Science Education and Research at Norfolk State University [A18]
 "Inside Einstein's Universe": Education Outreach Program [A356]
 "Invisible Universe": Teacher Workshops [A81]
 SEU Forum: Mission Support [A518]
 "SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Swift Gamma Ray Burst Mission: Public Presentations [A441]
 Swift General Student Workshops [A320]
 Swift: Glider [A254]
 Swift: Launch Lithograph [A255]
 Swift: Launch Sticker [A256]
 "You Are Here: Exploring Your Universe from Inner to Outer Space" [A261]

B58. Wilkinson Microwave Anisotropy Probe

WMAP

Description: WMAP continues to concentrate its E/PO efforts in electronic forms. WMAP's mission page and "Teacher's Guide to the Universe" Web site explain both the basics about cosmology and mission details. Additionally, WMAP has supported the SEU Forum's creation of the "Cosmic Questions" exhibit and Space Science Update Kiosk. WMAP has created four postcards for public and educational outreach and has helped to create a mission card for the Cosmic Journeys card game. WMAP has been represented at national and State conferences by education staff, and it has contributed to SEU Forum Kits. The WMAP E/PO coordinator has led a course for an informal audience at a local planetarium. WMAP continues to work with the Cooperative Satellite Learning Program and Old Bridge High School.

Lead: Dr. David Spergel, Princeton University, Peyton Hall, Dept. of Astrophysics, Princeton, NJ 08544-1001. E-mail: dns@astro.princeton.edu. Phone: 609-258-3589.

Contact: Ms. Lindsay Bartolone, Adler Planetarium and Astronomy Museum, Education, 1300 S. Lake Shore Drive, Chicago, IL 60605. E-mail: clark@astro.princeton.edu. Phone: 312-322-0316.

URL: <http://map.gsfc.nasa.gov>

Activities: "A Teacher's Guide to the Universe": Wilkinson Microwave Anisotropy Probe (WMAP) Workshop [A37]
 "Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]
 "Cosmic Questions": Public Outreach Events [A396]
 Expanding the Universe in the Classroom: Professional Development DVD [A55]
 "SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
 Wilkinson Microwave Anisotropy Probe (WMAP): Informal Outreach-MAPPING the Cosmic Microwave Background [A446]
 WMAP: Cooperative Satellite Learning Project (CSLP) [A331]

Navigator

B59. Navigator Program

Description: Navigator E/PO initiatives fall into three key programmatic areas: formal education, informal education, and public outreach (including via Internet and media). Additionally, several crosscutting activities support various components of the plan. All Navigator activities are important to the success of the program; however, two initiatives (the Community College Initiative and the Night Sky Network: Engaging Amateur Astronomy Clubs) stand out as significant new investments for Navigator and may serve as platforms for the participation of other NASA missions in the future.

Lead: Mr. William Greene, NASA Jet Propulsion Laboratory, Mail Code 301-486, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: william.m.greene@jpl.nasa.gov. Phone: 818-354-1277.

URL: <http://planetquest.jpl.nasa.gov>

Activities: "Alien Earths" Traveling Exhibit [A335]
 Development of GEMS Space Science Core Sequence Curriculum [A186]
 Navigator: Center for Astronomy Education [A13]
 Navigator: Girls in Science [A481]
 Navigator: Night Sky Network [A365]
 Navigator: Research Experiences for Minorities [A21]
 Navigator: Science Conferences [A513]
 Navigator: Museum Exhibits and Alliances [A366]
 Navigator: "PlanetQuest" [A482]

Navigator: Student Support and Classroom Visits [A307]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]

B60. Keck Interferometer

Description: The search for planets in other solar systems (extrasolar planets) and the possibility of extraterrestrial life are topics with the potential for engaging the imagination of a large variety of audiences of disparate ages and cultural and educational backgrounds. The E/PO program of the Keck/IOTA (Infrared Optical Telescope Array) team aims at exploiting this interest to promote the learning of basic physics, planetary science, and astronomy, as well as to reach out into underrepresented groups in science and technology. We have an exceptional opportunity to introduce nonscientists, educators, and students to the interdisciplinary practice of science while they learn about the location of Earth within the solar system and how that position is conducive to the onset of life. They discover that although Earth and the solar system appear to be somewhat unique, other similar systems may yet be found, and participants learn about the ways in which technology has increased our capabilities of searching for planets where life may exist. In addition, Keck participates in the overall Navigator E/PO program.

URL: <http://cfa-www.harvard.edu/cfa/oir/IOTA/>

Activities: One World, Many Worlds: Searching for Life on Earth and Other Planets [A99]
 "Science Concepts in Context" [A233]

Attached Payloads

B61. Advanced Cosmic-Ray Composition Experiment for the Space Station

ACCESS

Description: ACCESS is being developed for a possible launch in 2007. This experiment will make spectral, individual-element composition measurements at energies reaching up to 10^{15} electronvolts in order to address fundamental questions concerning the origin and acceleration of cosmic radiation.

Activities: Initiative to Enhance Space Science Education and Research at Norfolk State University [A18]

Other NASA Programs

B62. NASA Astrobiology Institute

NAI

Description: NAI is building a future community of astrobiologists while expanding the public's understanding of the nature and importance of our work. NAI's E/PO program is distributed throughout its Lead Teams. Each team directs a local effort with specific emphasis on that team's research and expertise while contributing to larger, collaborative projects. These include Web sites, print products, and curriculum supplements, as well as educational programs and activities, internships, presentations, and exhibits. Educating and training the next generation is another important aspect of NAI's mission, essential to ensuring continuity and longevity of the field of astrobiology. Many of our members train new researchers directly in their academic programs and laboratories. While some of these courses and programs are called "astrobiology," many of them reside within traditional astronomy, biology, chemistry, geology, and planetary science departments. In this way, NAI members are growing the field of astrobiology both as an independent discipline and through the expansion of traditional approaches.

Lead: Ms. Krisstina Wilmoth, NASA Astrobiology Institute (NAI), Ames Research Center, MS 240-1, Moffett Field, CA 94035. E-mail: Krisstina.L.Wilmoth@nasa.gov.

Contact: Ms. Daniella Scalice, NASA Astrobiology Institute (NAI), Ames Research Center, MS 240-1, Moffett Field, CA 94035. E-mail: dscalice@mail.arc.nasa.gov.

URL: <http://nai.arc.nasa.gov>

Activities: "Alien Earths" Traveling Exhibit [A335]
 Development of GEMS Space Science Core Sequence Curriculum [A186]
 Expanding Your Horizons: Outreach to Girls in Science [A468]
 Exploring Astrobiology: A Penn State-University of Puerto Rico Initiative [A16]
 Life in Space: An Astronomy/Astrobiology Unit for Upper Elementary and Middle School Students [A220]
 NASA Astrobiology Institute (NAI): NAI Trains the Next Generation of Astrobiologists [A512]
 NASA Astrobiology Institute (NAI): NAI Astrobiology Formal Education (K-12) [A306]
 NASA Astrobiology Institute (NAI): NAI Astrobiology in the Public Eye [A480]
 NASA Astrobiology Institute (NAI): NAI Astrobiology Informal Education [A364]
 NASA Astrobiology Institute (NAI): NAI Workshops and Summer Institutes-Teachers Experience Astrobiology [A148]
 NASA Astrobiology Institute: Postdoctoral Fellowship Program [A3]
 "Science Concepts in Context" [A233]
 Space Science Workshops for Educators [A109]

B63. Two Micron All-Sky Survey

2MASS

Description: The 2MASS project was designed to close the gap between our current technical capability and our knowledge of the near-infrared sky. In addition to providing a context for the interpretation of results obtained at infrared and other wavelengths, 2MASS is providing direct answers to immediate questions on the large-scale structure of the Milky Way and the local universe. The optimal use of the next generation of infrared space missions, such as the HST Near Infrared Camera and Multi-Object Spectrometer (NICMOS), the Spitzer Space Telescope, and

the Next Generation Space Telescope (NGST), as well as powerful ground-based facilities, such as Keck I, Keck II, and Gemini, required a new census with vastly improved sensitivity and astrometric accuracy than was previously available. To achieve these goals, 2MASS uniformly scanned the entire sky in three near-infrared bands to detect and characterize point sources brighter than about 1 milliJansky in each band, with a signal-to-noise ratio (SNR) greater than 10, using a pixel size of 2.0 arc seconds. Doing so achieved an 80,000-fold improvement in sensitivity relative to earlier surveys.

URL: <http://www.ipac.caltech.edu/2mass/>
Activities: "Science Concepts in Context" [A233]

B64. Space Technology-7

ST-7

Description: The Space Place has involved ST-7 in various events/activities. We attend conferences to promote Space Place and all of the projects involved with the Web site. Usually, mission- or Space Place-provided display materials, an activity guide, and handouts for an original group activity. Through these partnerships, we promote the Space Place Web site and NASA missions. Club Space Place provides quarterly interdisciplinary hands-on activities that are space- or Earth science-related. These quarterly activities go to the Space Place library and museum partners, Boys & Girls Clubs of America, Young Women's Christian Association (YWCA), and the Civil Air Patrol. Currently, there are 272 partners reaching thousands of children. On a monthly basis, Space Place provides articles for over 20 newspapers nationwide in both English and Spanish. The combined readership of these newspapers adds up to more than 2.5 million. The articles always end with information on activities and a link to the Space Place Web site and SMD mission Web sites. Diane Fisher submits articles to "Technology and Children" magazine four times a year and to "The Technology Teacher" magazine eight times a year. Each article, published under the Space Place header, refers to a particular mission. Each "Technology and Children" publication reaches an estimated 1,400 teachers and their students (possibly 42,000 children), and each "The Technology Teacher" publication reaches an estimated 8,000 teachers and their students (possibly 224,000 children). Each article is also posted on ITEA's Web site, which reaches an even wider audience. The dynamic Space Place Web site offers interactive experiences and fun facts for children and adults. The Space Place is supported by the New Millennium Program.

Lead: Ms. Nancy Leon, NASA Jet Propulsion Laboratory, New Millennium E/PO Program, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Nancy.J.Leon@jpl.nasa.gov. Phone: 818-354-1067.

URL: <http://spaceplace.jpl.nasa.gov>

Activities: Space Place: Contributions to Newspapers [A490]
Space Place: Web Site [A243]

B65. High Energy Astrophysics Science Archive Research Center

HEASARC

Description: Since 1996, the HEASARC E/PO program has been bringing information and curriculum support materials to upper middle school, high school, and lower undergraduate students and their teachers on topics relating to the structure and evolution of the universe, with an emphasis on high-energy astronomy. The E/PO program consists of the "Imagine the Universe!" Web site, a series of poster and information/activity booklets, and a repertoire of educator workshops. Both scientists and educators are involved in the development and testing of the materials, which use satellite data to teach topics in science and math. HEASARC also hosts the "StarChild" Web site and annually publishes a CD-ROM containing "Imagine," "StarChild," and the "Astronomy Picture of the Day." Materials are distributed to thousands of educators via workshops, meetings, and e-mail requests. The HEASARC also coordinates with the E/PO programs of other SEU high-energy astrophysics missions such as RXTE, GLAST, Swift, and XMM.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Code 662, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

URL: <http://heasarc.gsfc.nasa.gov>

Activities: "Ask an Astrophysicist" [A451]
AstroCappella: A Musical Exploration of the Universe [A42]
Beyond Einstein: From the Big Bang to Black Holes [A44]
Big Explosions and Strong Gravity [A266]
"Black Holes in a Different Light": Educator Workshop [A45]
"Cosmic Questions: Our Place in Space and Time" Traveling Exhibition [A337]
"Cosmic Questions": Public Outreach Events [A396]
Exploring Beyond Einstein: NASA's Search for Answers [A402]
Featured Scientist Article for "Imagine the Universe!" Web Site [A469]
HEASARC: General Educator Workshops [A74]
Hera: NASA Data Analysis in Your Classroom [A75]
"Hidden Lives of Galaxies": Educator Workshop [A76]
High-Energy Astrophysics Exhibit at GSFC Visitor Center [A471]
Imagine the Universe! CD-ROM (9th Edition) [A212]
"Science Concepts in Context" [A233]
SEU Forum: Mission Support [A518]
"SEU: Modeling the Universe Workshop": An Exploration of Space and Time [A105]
"Shedding Light on Einstein" [A428]
Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]

West Virginia Eastern Panhandle Regional Science Fair [A329]
 “What Is Your Cosmic Connection to the Elements?”: Educator Workshop [A126]
 “What Is Your Cosmic Connection to the Elements?”: Student Presentation [A330]

International Missions with NASA Participation

B66. Cosmic Background Explorer

COBE

Description: The COBE satellite was developed to measure, to the limits set by our astrophysical environment, the diffuse infrared and microwave radiation from the early universe. It was launched in November 1989 and carried three instruments: a Far InfraRed Absolute Spectrophotometer (FIRAS) to compare the spectrum of the cosmic microwave background radiation with a precise black body, a Differential Microwave Radiometer (DMR) to map the cosmic radiation precisely, and a Diffuse InfraRed Background Experiment (DIRBE) to search for the cosmic infrared background radiation. The cosmic microwave background spectrum was measured with a precision of 0.005 percent; the results confirmed the Big Bang theory of the origin of the universe.

URL: <http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1989-089A>

Activities: “Science Concepts in Context” [A233]

B67. High Energy Transient Explorer 2

HETE-2

Description: HETE-2’s prime objective is to carry out a multiwavelength study of gamma-ray bursts (GRBs) with ultraviolet, x-ray, and gamma-ray instruments. A unique feature of the mission is its capability to localize bursts with several-arc-second accuracy in near real time aboard the spacecraft. The original HETE spacecraft was lost as a result of a launch failure in November 1996. (HETE-2 was launched in October 2000.)

Lead: Dr. Irene Porro, Massachusetts Institute of Technology, NE80-6095, 77 Massachusetts Avenue, Cambridge, MA 02139. E-mail: iporro@space.mit.edu. Phone: 617-258-7481.

URL: <http://space.mit.edu/HETE/>

Activities: “Cosmic Questions: Our Place in Space and Time” Traveling Exhibition [A337]

SEU Forum: Mission Support [A518]

“SEU: Modeling the Universe Workshop”: An Exploration of Space and Time [A105]

B68. Suzaku

Description: Suzaku is a joint U.S.-Japanese mission to explore the x-ray universe at high spectral resolution. The mission uses a microcalorimeter that determines x-ray energies from cosmic sources by measuring the heat deposited by the x rays into an absorbing material. To accomplish this, the detector is cooled to 60 millikelvins using an adiabatic demagnetization refrigerator. The mission also includes lightweight mirrors to focus the x rays onto the detectors. Suzaku will probe the chemical composition of supernova remnants and galaxy clusters and will measure the motion of material before it falls into a black hole. The E/PO program for the mission seeks to bring students into the science and technology of the mission. Working with the NASA Student Involvement Program, Suzaku will sponsor a competition for students to share in the data from the mission. The Suzaku Guest Observer Facility at NASA’s Goddard Space Flight Center will support this effort. We will also produce a video that tells the story of the science, technology, and history of the mission for teachers to use in their science, math, or social studies classes. The video will particularly touch on the cross-cultural aspects of working with the Japanese. These efforts will be supported by a Web site that will provide background material and lessons on the use of spectroscopy in x-ray astronomy.

Lead: Dr. James Lochner, NASA Goddard Space Flight Center, Code 662, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: lochner@xeric.gsfc.nasa.gov. Phone: 301-286-9711.

URL: <http://suzaku-epo.gsfc.nasa.gov/docs/suzaku-epo/>

Activities: “Ask an Astrophysicist” [A451]

“Cosmic Questions: Our Place in Space and Time” Traveling Exhibition [A337]

“Exploring the Hot Universe with the Coolest Satellite” Educator Workshop [A58]

“Exploring the Hot Universe with the Coolest Satellite”: Student Workshop [A273]

High-Energy Astrophysics Exhibit at GSFC Visitor Center [A471]

“SEU: Modeling the Universe Workshop”: An Exploration of Space and Time [A105]

Workshop on Topics in Modern Astronomy [A128]

B69. X-ray Multi-Mirror Mission

XMM

Description: XMM-Newton is a European Space Agency x-ray spectroscopy observatory launched in December 1999. Beginning in 2003, NASA participation in the XMM-Newton E/PO program has been led by the group at Sonoma State University. The program is developing curriculum materials for grades 6–12, a computer-based x-ray spectroscopy simulation laboratory exercise in partnership with Project CLEA (Contemporary Laboratory Experiences in Astronomy), and a Starlab planetarium program showcasing the x-ray sky.

Lead: Dr. Lynn Cominsky, Sonoma State University, Department of Physics and Astronomy, 1801 East Cotati Avenue, Rohnert Park, CA 94928. E-mail: lynncc@charmian.sonoma.edu. Phone: 707-664-2655.

URL: <http://xmm.sonoma.edu>

Activities: “Inside Einstein’s Universe”: Education Outreach Program [A356]

XMM-Newton: High-Energy Public Presentations [A447]

XMM-Newton: High-Energy Student Presentations [A333]
 XMM-Newton: High-Energy Teacher Workshops [A129]
 "You Are Here: Exploring Your Universe from Inner to Outer Space" [A261]

HELIOPHYSICS MISSIONS

Major Missions

B70. Solar Probe

SP

Description: Solar Probe (SP) will make the first visit to our star to explore the complex and time-varying interplay of the Sun and Earth, which affects human activity. SP will determine where and what physical processes heat the corona and accelerate the solar wind to its supersonic velocity. A combined remote sensing and in situ sampling from within the solar corona itself will provide a "ground" never before available from astronomical measurements made from spacecraft in the Earth's orbit or Lagrange points. Solar Probe is currently being developed as part of the Sun-Earth Connection theme within the NASA Science Mission Directorate.

URL: <http://solarprobe.gsfc.nasa.gov/>

Activities: "Passport To The Solar System" (PTSS) [A228]

B71. Ulysses

Description: Ulysses makes passes over the north and south poles of the Sun in order to forecast solar weather. Launched in October 1990, the spacecraft was the first to explore interplanetary science at high solar latitudes.

URL: <http://www.ulysses.jpl.nasa.gov/index.html>

Activities: NASA Balloon Science Workshop [A20]
 "Passport To The Solar System" (PTSS) [A228]
 "Science Concepts in Context" [A233]
 Ulysses: Jet Propulsion Laboratory Open House [A444]
 Ulysses: Speakers Bureau [A327]
 Ulysses: Teacher Training [A125]
 Ulysses: Web Site [A502]
 Voyager: Public Outreach [A445]

B72. Voyager

Description: The Voyager mission continues its quest to expand the boundaries of space exploration. Voyager 1, now the most distant humanmade object in the universe, and Voyager 2, close on its heels, continue their groundbreaking journeys with their current mission to study the region in space where the Sun's influence ends and the dark recesses of interstellar space begin.

Lead: Ms. Andrea Angrum, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: andrea.angrum@jpl.nasa.gov. Phone: 818-354-6775.

URL: <http://voyager.jpl.nasa.gov>

Activities: "Passport To The Solar System" (PTSS) [A228]
 "Science Concepts in Context" [A233]
 Space Place: Contributions to Newspapers [A490]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Ulysses: Jet Propulsion Laboratory Open House [A444]
 Ulysses: Teacher Training [A125]
 Voyager: Classroom Visits [A328]
 Voyager: Public Outreach [A445]
 Voyager: Web Site [A503]

Explorers

B73. Advanced Composition Explorer

ACE

Description: The primary purpose of the ACE is to determine and compare the isotopic and elemental composition of several distinct samples of matter, including the solar corona, the interplanetary medium, the local interstellar medium, and galactic matter. For education and public outreach, ACE shares the following topics through a Web site, printed materials, workshops, and presentations: the composition of the solar system and extrasolar bodies, particle composition from solar wind to galactic cosmic rays, the causes and effects of transient events, solar and galactic evolution, and stellar nucleosynthesis.

Lead: Ms. Beth Barbier, NASA Goddard Space Flight Center, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: beth@milkyway.gsfc.nasa.gov. Phone: 301-286-7209.

URL: <http://www.srl.caltech.edu/ACE/ASC/>

Activities: ACE Classroom Presentations [A263]
 ACE Public Lectures [A389]
 Answering Web Questions for Solar Week [A390]
 "Ask a Physicist" [A450]

“Ask an Astrophysicist” [A451]
 Earth and Space Science Education Product Workshop [A54]
 Hera: NASA Data Analysis in Your Classroom [A75]
 High-Energy Astrophysics Exhibit at GSFC Visitor Center [A471]
 Los Alamos Space Science Outreach (LASSO) Program [A142]
 “Passport To The Solar System” (PTSS) [A228]
 “Science Concepts in Context” [A233]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 “What Is Your Cosmic Connection to the Elements?”: Student Presentation [A330]
 Workshop on Topics in Modern Astronomy [A128]
 Young Engineers and Scientists (YES) Program [A334]

B74. Fast Auroral Snapshot (FAST) Explorer

Description: The FAST Explorer was launched into orbit in August 1996. The instruments aboard FAST measure charged particles that enter Earth’s upper atmosphere. Large waves of these particles from the Sun begin to glow once inside Earth’s atmosphere, causing a spectacular light show known as the aurora borealis, or northern lights. The education and public outreach for FAST includes K–12 curriculum components such as lessons, activities, and information that will help teachers and students understand the aurora, the sounding rockets, and the satellites that study them.
Lead: Dr. Nahide Craig, University of California, Berkeley, MC 7450, Berkeley, CA 94720.
 E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.
URL: http://cse.ssl.berkeley.edu/fast_epo/
Activities: Earth and Space Science Education Product Workshop [A54]
 Exploring Magnetism in Solar Flares [A193]
 Fast Auroral Snapshot (FAST): Curriculum Development, Dissemination, and Public Outreach [A195]
 FAST: Classroom Visits and Student Support [A274]
 Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
 RHESSI: Classroom Visits and Student Support [A311]
 RHESSI: Public Outreach and Informal Education [A424]
 STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination [A114]
 STEREO: Teacher Professional Development [A115]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 THEMIS: Education and Public Outreach [A121]
 THEMIS: Teacher Professional Development [A122]

B75. Imager for Magnetopause-to-Aurora Global Exploration

IMAGE

Description: The IMAGE satellite is the first spacecraft dedicated to imaging Earth’s magnetosphere, a region of space that is controlled by Earth’s magnetic field and contains extremely tenuous plasmas of both solar and terrestrial origin. IMAGE employs a variety of imaging techniques to see the invisible and produce the first comprehensive global images of plasma in the inner magnetosphere. The IMAGE education and public outreach program is called Public Outreach, Education, Teaching and Reaching Youth (POETRY). We specialize in developing classroom activities, CD-ROMs, and other products that help students understand Earth’s magnetic field, its radiation belts, and the impact of solar activity on our technology. The goal of POETRY is to rewrite textbooks to explain the causes of auroras, to update K–12 descriptions of Earth’s magnetic field and its systems of particles, and to provide teachers with the latest information about the effects of space weather. We also conduct an award-winning “Ask the Space Scientist” Web-based forum, where students may ask questions about space science.
Contact: Dr. Deborah Jensen, Rice University, Biochemistry and Cell Biology, MS 140, 6100 Main Street, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.
URL: <http://image.gsfc.nasa.gov/poetry>
Activities: Earth and Space Science Education Product Workshop [A54]
 Earth Science Planetarium Shows [A341]
 IMAGE: “Ancient Observatories: Timeless Knowledge” [A77]
 IMAGE: An Introduction to Geomagnetism [A201]
 IMAGE: “Ask the Space Scientist” [A473]
 IMAGE: Classroom Visits [A291]
 IMAGE: Exploring Earth’s Magnetic Field [A202]
 IMAGE: Museum and Library Lectures [A474]
 IMAGE: Northern Lights and Solar Sprites [A203]
 IMAGE: Planetarium Programs and Museum Kiosks [A355]
 IMAGE: Public Talks [A410]
 IMAGE: Radiation Belts and Trapped Particles [A204]
 IMAGE: Radio Programs [A411]
 IMAGE: Soda Bottle Magnetometer [A205]
 IMAGE: Solar Storms and You! [A206]
 IMAGE: Space Science Mathematics [A207]

IMAGE: Space Weather CD-ROM [A208]
 IMAGE: Teacher Workshops and Conferences [A78]
 IMAGE: The Northern Lights [A209]
 IMAGE: "The SciFiles: The Case of the Technical Knockout" [A210]
 IMAGE: Transit of Venus [A211]
 IMAGE: Webcast [A412]
 Magnetospheric MultiScale (MMS): Workshop and Conference Presentations [A414]
 "Passport To The Solar System" (PTSS) [A228]
 "Science Concepts in Context" [A233]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 Teacher Courses in Master of Science Teaching Program [A162]

B76. Reuven Ramaty High Energy Solar Spectroscopic Imager

RHESSI

Description: RHESSI is funded by NASA's Explorers Program under the category of small explorers. RHESSI may help to answer one of the most fundamental questions about how the Sun works: How do solar flares release such large quantities of energy in such a short span of time? (A single flare can be as powerful as 10 million volcanic explosions!) The centerpiece of the RHESSI mission is the imager, which uses a new technology to capture images and spectra of high-energy solar flares. RHESSI's primary E/PO goal is to provide high-quality education and outreach experiences for precollege teachers, students, and the general public. Additionally, through our university/NASA Center collaboration, RHESSI will be able to provide research opportunities to enhance the education of undergraduate and graduate students. Thus, the RHESSI E/PO effort will permeate all facets of the mission, allowing the college-level students to serve as effective liaisons to the precollege community that we plan to involve. The University of California, Berkeley's E/PO efforts will focus on middle and high school teachers, their students, and the public. In the formal arena, they will concentrate on the middle school grades 6–8, since that is where RHESSI-related content is taught in the precollege science curriculum and where many students stop being interested in science. They will also conduct regular public-awareness activities, highlighting RHESSI data in collaboration with the Exploratorium. The Exploratorium's "Live@the Exploratorium" Internet Webcast series will be able to highlight RHESSI during the years of high solar activity through regularly scheduled public events. To complement these high-visibility Internet Webcasts for the public, we will develop self-guided Internet modules that highlight key aspects of the RHESSI mission and its data.

Lead: Dr. Nahide Craig, University of California, Berkeley, MC 7450, Berkeley, CA 94720.

E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

URL: <http://cse.ssl.berkeley.edu/hessi>

Activities: Answering Web Questions for Solar Week [A390]
 Earth and Space Science Education Product Workshop [A54]
 Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
 RHESSI: Classroom Visits and Student Support [A311]
 RHESSI: Public Outreach and Informal Education [A424]
 STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination [A114]
 STEREO: Teacher Professional Development [A115]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Connection Education Forum (SECEF): Educator Conference Support [A116]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 THEMIS: Education and Public Outreach [A121]
 THEMIS: Teacher Professional Development [A122]

B77. Solar Anomalous and Magnetospheric Particle Explorer

SAMPEX

Description: SAMPEX is designed to detect solar energy particles, precipitating energetic electrons, anomalous cosmic rays, and galactic cosmic rays throughout a solar cycle. E/PO consists of SAMPEX scientists and engineers at NASA's Goddard Space Flight Center who support a high school team in the Cooperative Satellite Learning Project (CSLP). The CSLP is a unique education partnership among various high schools; Allied Signal Technical Services Corporation in Seabrook, MD; and Goddard that involves high school students in the process of developing and operating SAMPEX. This pilot program provides students with an understanding of the overall end-to-end system that is used to support SAMPEX, and it will demonstrate how NASA implements a specific mission for a given scientific endeavor. It also introduces the students to careers in space. A mission-monitoring system in the high school receives and processes SAMPEX satellite data and provides computer-assisted tutoring. In this way, students participate directly in SAMPEX tests, simulations, and orbital operations.

Lead: Mr. Jim Watzin, NASA Goddard Space Flight Center, Code 474, Greenbelt Road, Greenbelt, MD 20771-0001.

E-mail: jim.watzin@gsfc.nasa.gov. Phone: 301-286-7933.

URL: <http://sunland.gsfc.nasa.gov/smex/sampex/index.html>

Activities: "Passport To The Solar System" (PTSS) [A228]

B78. Student Nitric Oxide Explorer

SNOE

- Description:** SNOE is a small scientific satellite that is measuring the effects of energy from the Sun and the magnetosphere on the density of nitric oxide in Earth's upper atmosphere. It is one of the three projects selected for the STudent Explorer Demonstration Initiative (STEDI) Program to demonstrate that university-led teams can successfully carry out high-quality space science and technology missions. Students are involved in all aspects of the project. Under the supervision of the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado (UC) and industry mentors, they worked on the design study, built the spacecraft and instruments, wrote the flight software, integrated and tested the instruments and subsystems, and integrated the satellite with the launch vehicle. SNOE will be operated from the LASP Space Technology Research building by a team of students and mission operations professionals. Advanced undergraduate and graduate students will analyze the data. The student training effort was coordinated through a course offered continuously in the UC Department of Aerospace Engineering Sciences.
- Lead:** Mr. Kenneth Mankoff, University of Colorado, Boulder, Boulder, CO 80309. E-mail: mankoff@lasp.colorado.edu. Phone: 303-492-2326.
- URL:** <http://lasp.colorado.edu/snoe/>
- Activities:** Student Nitric Oxide Explorer Guest Investigator: Modeling and Observations of Solar Influences on Thermospheric Nitric Oxide [A252]

B79. Time History of Events and Macroscale Interactions during Substorms

THEMIS

- Description:** The Time History of Events and Macroscale Interactions during Substorms (THEMIS) is to be launched in 2007. THEMIS is a five-satellite mission with the job of determining the causes of the global reconfigurations of Earth's magnetosphere that are evidenced in auroral activity. THEMIS consists of five small satellites, carrying identical suites of electric, magnetic, and particle detectors, that will be put in carefully coordinated orbits. Every 4 days, the satellites will line up along Earth's magnetic tail, allowing them to track disturbances. The satellite data will be combined with observations of the aurora from a network of observatories across the Arctic Circle. As part of the E/PO program for the THEMIS mission, new ground magnetometer stations will be established at secondary schools and tribal and community colleges in eight States. The Space Grant Consortia of the eight States (Alaska, Oregon, Montana, North Dakota, South Dakota, Wisconsin, Michigan, Pennsylvania) worked with the mission and the State schools to identify the locations for the magnetometer stations and coordinate local educational and outreach efforts of the new facility, its data, and the THEMIS mission, extending the impact of each magnetometer station beyond the single school at which it is located.
- URL:** <http://sprg.ssl.berkeley.edu/themis/>
- Activities:** Earth and Space Science Education Product Workshop [A54]
 Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
 RHESSI: Classroom Visits and Student Support [A311]
 RHESSI: Public Outreach and Informal Education [A424]
 STEREO: Teacher Professional Development [A115]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 THEMIS: Education and Public Outreach [A121]
 THEMIS: Teacher Professional Development [A122]

B80. Transition Region And Coronal Explorer

TRACE

- Description:** A mission of the Small Explorer program, TRACE observes the effects of the emergence of magnetic flux from deep inside the Sun to the outer corona with high spatial and temporal resolution. (TRACE was launched in April 1998.)
- Lead:** Ms. Dawn Myers, NASA Goddard Space Flight Center, 682, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: dcm@chippewa.nascom.nasa.gov. Phone: 301-286-5283.
- URL:** <http://nis-www.lanl.gov/nis-projects/twins/>
- Activities:** Answering Web Questions for Solar Week [A390]
 Earth and Space Science Education Product Workshop [A54]
 "Passport To The Solar System" (PTSS) [A228]
 "Science Concepts in Context" [A233]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 TRACE: Image Distribution to the Public [A443]
 TRACE: Support for Educational and Public Outreach [A323]
 TRACE: Support for "Expanding Your Horizons" Workshop [A324]
 TRACE: Support of Interns at SAO [A325]
 TRACE: Support of Student Interns [A326]

International Solar-Terrestrial Physics (ISTP)

B81. Cluster II

- Description:** Cluster is a European Space Agency program with major NASA involvement. The four Cluster spacecraft carry out 3-D measurements in Earth's magnetosphere, covering both large- and small-scale phenomena in the

sunward and tail regions. The first two spacecraft were launched in July 2000; the second pair were launched in August 2000.

Lead: Dr. Patricia Reiff, Rice University, Physics and Astronomy, 6100 Main Street, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, MS 140, 6100 Main Street, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

URL: <http://sci.esa.int/home/clusterii/index.cfm>

Activities: Cluster II: Public Talks [A394]
Earth Science Planetarium Shows [A341]
Magnetospheric MultiScale (MMS): Underserved Minority Student Presentations [A297]
Teacher Courses in Master of Science Teaching Program [A162]

B82. Polar

Description: The Solar Terrestrial Science Program (STSP), composed of SOHO and Cluster, with Geotail (Institute of Space and Astronautical Science (ISAS)-Japan), Wind, and Polar, cooperates in E/PO by providing educational products, science data, and images that tell the story of the Sun. These materials (images) can be seen in most museums, planetariums, and science centers, and they support STSP's work with the general public. Images are also shown by national television broadcasting companies to share a solar event with the public when it happens.

Lead: Dr. Nicola Fox, Johns Hopkins University Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723-6099. E-mail: foxnj1@jhuapl.edu.

URL: <http://www-spf.gsfc.nasa.gov/istp/polar/>

Activities: Do Killer Electrons Affect You? [A187]
Earth and Space Science Education Product Workshop [A54]
"Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
Student Observation Network: Tracking a Solar Storm [A253]
Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]

B83. Wind

Description: The Solar Terrestrial Science Program (STSP), composed of SOHO and Cluster, with Geotail (ISAS-Japan), Wind, and Polar, cooperates in education and public outreach by providing educational products, science data, and images that tell the story of the Sun. These materials (images) can be seen in most museums, planetariums, and science centers, and they support STSP's work with the general public. Images are also shown by national television broadcasting companies to share a solar event with the public when it happens.

Lead: Dr. Nicola Fox, Johns Hopkins University Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723-6099. E-mail: foxnj1@jhuapl.edu.

URL: <http://www-istp.gsfc.nasa.gov/istp/wind/wind.html>

Activities: Earth and Space Science Education Product Workshop [A54]
Graduate Space Science Education and Disturbed Solar Wind Effects on Earth's Environment [A17]
"Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
Student Observation Network: Tracking a Solar Storm [A253]
Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]

B84. Solar and Heliospheric Observatory

SOHO

Description: SOHO is designed to study the internal structure of the Sun, its extensive outer atmosphere, and the origin of the solar wind: the stream of highly ionized gas that blows continuously outward through the solar system. SOHO is helping us to better understand the interactions between the Sun and Earth's environment. Its legacy may enable scientists to solve some of the most perplexing riddles about the Sun, including the heating of the solar corona, the acceleration of the solar wind, and the physical conditions of the solar interior. It will give solar physicists their first long-term, uninterrupted view of the mysterious star that we call the Sun. The SOHO E/PO program generates and distributes materials on the Sun and SOHO for use in schools and by the public. The materials include posters, CDs, image sets, slide sets, stickers, and videos. Scientists give presentations in classrooms, at teacher workshops, in museums, and to other scientists. Materials are also provided to publications and news organizations.

Lead: Mr. Steele Hill, NASA Goddard Space Flight Center, Code 682.3, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: steele.hill@gsfc.nasa.gov. Phone: 301-286-6452.

Contact: Mr. Dennis Christopher, NASA Goddard Space Flight Center, Code 600, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: dennis@grace.nascom.nasa.gov.

URL: <http://soho.nascom.nasa.gov/>

Activities: Answering Web Questions for Solar Week [A390]
Earth and Space Science Education Product Workshop [A54]
"Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
SOHO: Support for Educational Outreach [A315]
Space Science Workshops for Educators [A109]

Solar Terrestrial Probes (STP)

B85. Solar Terrestrial Probes/Program Office

STP/PO

Description: The STP program is a comprehensive effort to observe and understand our star and its effect on our environment. The E/PO effort focuses on sharing those discoveries in the formal and informal education communities through mentoring, exhibits, and workshops.

URL: <http://stp.gsfc.nasa.gov>

Activities: Solar Terrestrial Probes: Classroom and Public Engagements [A433]
 Solar Terrestrial Probes: Educational Programs and Workshops [A434]
 Solar Terrestrial Probes: Planetarium, Science Center, and Museum Outreach [A435]

B86. Magnetospheric MultiScale

MMS

Description: Broad regions of Earth's magnetosphere are connected by fundamental processes operating in the thin boundary layers. Processes of vastly different scale sizes can interact strongly. Understanding these fundamental processes requires multipoint measurements that uniquely separate temporal and 3-D spatial variations. The MMS mission goal is to make those necessary measurements with a five-spacecraft constellation in highly elliptical orbits. MMS is a future Solar Terrestrial Probes mission.

Lead: Dr. Patricia Reiff, Rice University, Physics and Astronomy, 6100 Main Street, Houston, TX 77251-1892. E-mail: reiff@rice.edu. Phone: 713-348-4634.

Contact: Dr. Deborah Jensen, Rice University, Biochemistry and Cell Biology, MS 140, 6100 Main Street, Houston, TX 77251-1892. E-mail: djensen@rice.edu. Phone: 713-349-1800.

URL: <http://stp.gsfc.nasa.gov/missions/mms/mms.htm>

Activities: Earth Science Planetarium Shows [A341]
 Immersive Earth: Conference Demonstrations [A79]
 Magnetospheric MultiScale (MMS): School Visits [A295]
 Magnetospheric MultiScale (MMS): Student Programs [A296]
 Magnetospheric MultiScale (MMS): Underserved Minority Student Presentations [A297]
 Magnetospheric MultiScale (MMS): Workshop and Conference Presentations [A414]
 Teacher Courses in Master of Science Teaching Program [A162]
 Young Engineers and Scientists (YES) Program [A334]

B87. Solar-B

Description: The Solar-B satellite observatory will be launched into a polar orbit around Earth to allow almost uninterrupted observations of our Sun. Three major instruments will make coordinated observations at multiple wavelengths, examining processes taking place on the Sun's surface and in its atmospheric envelope. Solar-B E/PO is primarily developed and implemented at the new Chabot Space and Science Center in Oakland, CA, in collaboration with the Lockheed Martin Solar and Astrophysics Lab. Forms of E/PO include exhibits, teacher training workshops, video/multimedia productions, posters, brochures, an adult solar astronomy class, "solar" summer camps for children, and a high school solar astronomy internship program.

Lead: Mr. Benjamin Burrell, Chabot Space and Science Center, 10000 Skyline Blvd, Oakland, CA 94619. E-mail: bburrell@chabotspace.org. Phone: 510-336-7308.

URL: <http://www.chabotspace.org/vsc/exhibits/solarb/default.asp>

Activities: Ancient Eyes Looked to the Skies: Archaeoastronomy in the Americas [A40]
 Chabot Science Center: Winter Solstice 2004 [A393]
 "Fun in the Sun" Summer Camp [A343]
 Sun Explorer Activity Backpack [A496]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 "Touch the Sun": Teacher Workshop [A124]

B88. Solar Terrestrial Relations Observatory

STEREO

Description: STEREO is the third of five Solar Terrestrial Probes. This mission will obtain simultaneous images of the Sun from two spacecraft and build a 3-D picture of coronal mass ejections (CMEs) and the complex structures around them. STEREO will also study the propagation of disturbances through the heliosphere and their effects at Earth orbit. The STEREO E/PO program participates in the Sun-Earth Connection Education Forum-sponsored workshops that meet the needs of educators at all grade levels. We present these workshops to inservice educators to teach them about the most recent and relevant solar and STEREO science discoveries, which they will then teach in their classrooms. Mission scientists participate in the workshops to share the science content. Education specialists provide integrated, hands-on activities to demonstrate science applications in the classroom. The missions also provide images and animations to support programs that have been developed by the science centers specifically for educators and for the general public.

Lead: Dr. Nahide Craig, University of California, Berkeley, MC 7450, Berkeley, CA 94720.
 E-mail: ncraig@ssl.berkeley.edu. Phone: 510-643-7273.

URL: <http://stp.gsfc.nasa.gov/missions/stereo/stereo.htm>
 Activities: Earth and Space Science Education Product Workshop [A54]
 MESSENGER: Student Support [A304]
 "Passport To The Solar System" (PTSS) [A228]
 Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI): Teacher Professional Development [A103]
 RHESSI: Classroom Visits and Student Support [A311]
 RHESSI: Public Outreach and Informal Education [A424]
 Solar TErrestrial RELations Observatory (STEREO): Mission Information [A239]
 STEREO In-situ Measurements of Particles And CME Transients (IMPACT): Curriculum Development and Dissemination [A114]
 STEREO/IMPACT: Classroom Visits and Student Support [A317]
 STEREO/IMPACT: Public Outreach [A495]
 STEREO: Fact Sheet [A250]
 STEREO: Teacher Professional Development [A115]
 STEREO: Web Site [A251]
 THEMIS: Education and Public Outreach [A121]
 THEMIS: Teacher Professional Development [A122]
 TIMED: Teacher Support [A123]

B89. Thermosphere Ionosphere Mesosphere Energetics and Dynamics

TIMED

Description: The TIMED mission is currently studying the influences of the Sun and human activity on the least explored and understood region of Earth's atmosphere: the Mesosphere and Lower Thermosphere/Ionosphere (MLTI). The MLTI region is the gateway between Earth's environment and space, where the Sun's energy is first deposited into Earth's environment. TIMED focuses on the portion of this region located approximately 60 to 180 kilometers above the surface. From studying portions of Earth's atmosphere, scientists believe global change is occurring, primarily due to variations in the Sun's cycle and the human-induced release of gases such as methane and carbon dioxide into the atmosphere. The TIMED E/PO Web site offers activities, a Teacher's Corner, and TIMED lesson plans.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723-6099. E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

URL: <http://www.timed.jhuapl.edu>

Activities: MESSENGER: Student Support [A304]
 "Passport To The Solar System" (PTSS) [A228]
 "Science Concepts in Context" [A233]
 Student Observation Network: Tracking a Solar Storm [A253]
 Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
 TIMED: Public Outreach [A442]
 TIMED: Student Events [A321]
 TIMED: Student Support [A322]
 TIMED: Teacher Support [A123]

Other NASA Programs

B90. Living With a Star Program Office

LWS/PO

Description: Living With a Star (LWS) is a NASA initiative that addresses aspects of the Sun-Earth system that affect life and society. This program is a part of the Sun-Earth Connection (SEC) theme within the SMD. The program elements are (1) a space weather research network; (2) theory, modeling, and data-analysis programs; (3) space environment test beds; and (4) established and expanded partnerships.

Lead: Dr. Evelina Felicit-Maurice, NASA Goddard Space Flight Center, Code 460, Bldg. 6, Room S141, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: efelicit@pop400.gsfc.nasa.gov. Phone: 301-286-6949.

URL: <http://lws.gsfc.nasa.gov>

Activities: Astronomy Institute [A43]
 Charged Particle Motion in Earth's Magnetosphere [A177]
 Connecting the Sun, Earth, Sunspots, and Climate [A178]
 Earth's Atmosphere Understood Through Graph Reading [A188]
 Educational Family Guides to the Sun and Mars [A189]
 Goddard Days [A404]
 IMAGE: Radiation Belts and Trapped Particles [A204]
 Living With a Star (LWS) Student Internship [A6]
 Living With a Star (LWS): Followup Program and School Visits [A19]
 Living With a Star (LWS): Inservice Teachers Workshop [A86]
 Living With a Star (LWS): Master Teacher Leadership and Mentor Program [A87]
 Living With a Star (LWS): Preservice Workshop [A88]
 LWS: STEM Institute for Administrators [A144]
 "Our Star the Sun": Summer Institute [A101]
 "Passport To The Solar System" (PTSS) [A228]

“Science Concepts in Context” [A233]
 Scientists in Schools: Preparing for K–12 Outreach [A234]
 Space Place: Conferences [A241]
 Students United with NASA Becoming Enthusiastic About Math and Science (SUNBEAMS) [A33]
 Workshops, Sessions, and Seminars for Scientists and E/PO Leads on K–14 Education and Public Outreach [A520]

B91. Solar Dynamics Observatory

SDO

Description: The Solar Dynamics Observatory (SDO) project is the first of the Living With a Star (LWS) programs under the Sun-Earth Connection (SEC) theme at NASA. The project goals are to understand the solar variations that influence life on Earth and humanity’s technological systems by determining (1) how the Sun’s magnetic field is generated and structured and (2) how this stored energy is converted and released into the heliosphere and geospace in the form of solar wind, energetic particles, and variations in the solar irradiance. The SDO E/PO program will focus primarily on informal education and public outreach efforts that share NASA’s vision to “inspire the next generation of explorers, as only NASA can,” promote science literacy, and raise public awareness of the SEC theme, with emphasis on SDO research and discoveries.

Lead: Ms. Emilie Drobnes, NASA Goddard Space Flight Center, Code 682.3, Greenbelt Road, Greenbelt, MD 20771-0001. E-mail: Emilie@ihy.gsfc.nasa.gov. Phone: 301-286-3146.

URL: <http://sdo.gsfc.nasa.gov>

Activities: Solar Dynamics Observatory (SDO): Education Initiatives for Museums, Planetariums, and Science Centers [A371]
 Solar Dynamics Observatory (SDO): Educator Workshops [A107]
 Solar Dynamics Observatory (SDO): Other Educational Projects [A238]
 Space Science Workshops for Educators [A109]

B92. Space Technology-5 (New Millennium)

ST-5

Description: The Space Place has involved ST-5 in various events/activities. We attend conferences to promote Space Place and all of the projects involved with the Web site. Usually, mission- or Space Place-related items are passed out. Libraries, science museums, planetariums, zoos, and aquariums across the United States have formed “Club Space Place” partnerships with NASA. They get Space Place-provided display materials, an activity guide, and handouts for an original group activity. Through these partnerships, we promote the Space Place Web site and NASA missions. Club Space Place provides quarterly interdisciplinary hands-on activities that are space- or Earth science-related. These quarterly activities go to the Space Place library and museum partners, Boys & Girls Clubs of America, the YWCA, and the Civil Air Patrol. Currently, there are 272 partners reaching thousands of children. On a monthly basis, Space Place provides articles for over 20 newspapers nationwide in both English and Spanish. The combined readership of these newspapers adds up to more than 2.5 million. The articles always end with information on activities and links to the Space Place Web site and the SMD mission Web sites. Diane Fisher submits articles to “Technology and Children” magazine four times a year and to “The Technology Teacher” magazine eight times a year. Each article published under the Space Place header refers to a particular mission. Each “Technology and Children” publication reaches an estimated 1,400 teachers and their students (possibly 42,000 children), and each “The Technology Teacher” publication reaches an estimated 8,000 teachers and their students (possibly 224,000 children). Each article is also posted on ITEA’s Web site, which reaches an even wider audience. The dynamic Space Place Web site offers interactive experiences and fun facts for children and adults. The Space Place is supported by the New Millennium Program. It reaches an average of 3,000 Web users per day.

Lead: Ms. Nancy Leon, NASA Jet Propulsion Laboratory, M/S 171-350, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Nancy.J.Leon@jpl.nasa.gov. Phone: 818-354-1067.

URL: <http://spaceplace.nasa.gov>

Activities: Designing Nature’s Way [A184]
 Space Place: Conferences [A241]
 Space Place: Contributions to “National Association for Bilingual Education (NABE) News” [A489]
 Space Place: Contributions to ITEA’s “The Technology Teacher” [A242]
 Space Place: Contributions to Newspapers [A490]
 Space Place: Web Site [A243]

International Missions with NASA Participation

B93. Yohkoh

Description: Yohkoh, an observatory for studying x rays and gamma rays from the Sun, was a project of the Institute for Space and Astronautical Sciences, Japan. The spacecraft was built in Japan, but contributions to the observing instruments were made by the United States and Great Britain. Yohkoh was launched in August 1991; the spacecraft lost attitude control in December 2001, and recovery attempts were unsuccessful.

URL: <http://www.lmsal.com/SXT/>

Activities: “Passport To The Solar System” (PTSS) [A228]
 “Science Concepts in Context” [A233]
 Solar Week [A240]

PLANETARY SCIENCE MISSIONS

Major Missions

B94. Cassini-Huygens Probe

Description: The Cassini-Huygens E/PO mission is dedicated to bringing the excitement of the Cassini mission and the Saturn system to audiences throughout the Nation and abroad. Educational activities, cooperative educator programs, educator conferences, public Web access, media support and releases, museum participation, and the Cassini Speakers' group are just a few of the ways we seek to engage the public in this multinational exploration program about Saturn. The formal education component focuses on "Reading, Writing, and Rings," an integrated reading and language arts program for grades 1–4. The Saturn Observation Campaign (SOC) brings amateur astronomers into the Cassini community. Members host star parties where participants view Saturn. The "Ring World" planetarium show is targeted at midrange planetariums. Ongoing efforts include Cassini Speakers, Solar System Ambassador support, and the 5ñ12 formal education program "Saturn in Your Kitchen and Backyard."

Contact: Ms. Jane Houston Jones, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Jane.H.Jones@jpl.nasa.gov. Phone: 818-393-6435.

URL: <http://saturn.jpl.nasa.gov>

Activities: Cassini: Classroom Visits [A267]
Cassini: Public Talks [A392]
Cassini: "Ring World" Planetarium Showings [A458]
GAVRT: Classroom Implementation-Cassini Mission [A275]
GAVRT: Scientist/Student Teleconferences [A279]
"Mission to Saturn" Planetarium Show [A362]
"Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
"Secrets of Saturn" Sky Show [A370]
Space Science Workshops for Educators [A109]

B95. Galileo

Description: The primary focus of the Galileo E/PO program has been to archive our scientific achievements using the Galileo Web site. Support of speakers and Solar System Ambassadors continued until Galileo's end-of-mission impact on Jupiter in September 2003.

Lead: Ms. Shannon McConnell, NASA Jet Propulsion Laboratory, MS 230-101, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: shannon.mcconnell@jpl.nasa.gov. Phone: 818-393-5815.

URL: <http://jpl.nasa.gov/galileo>

Activities: "Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]

B96. Jet Propulsion Laboratory Solar System Exploration Theme Lead

JPL SSE

Description: The JPL SSE Theme Lead coordinates the activities of JPL's solar system exploration mission outreach coordinators and specialists in media relations, television production, Internet services, and education (both formal and informal). The Theme Lead also coordinates the science data analysis and research activities of the missions.

Lead: Ms. Anita Sohus, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109. E-mail: Anita.M.Sohus@jpl.nasa.gov. Phone: 818-354-6613.

Activities: Cosmos in the Classroom 2004-Resource Book [A11]
"MarsQuest" Planetarium Show [A359]
NASA Planetary Science Summer School [A10]
"Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
Solar System Educators Program (SSEP) [A157]
Space Science Workshops for Educators [A109]
Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]
"To Mars with MER" [A501]

Mars Exploration Program

B97. Mars Public Engagement

Description: Mars exploration will be NASA's signature effort in planetary science over the next two decades. This program, the largest in SMD, will provide regular and frequent voyages to Mars. Such a compelling program deserves forward-looking initiatives to engage the public in Mars exploration, scientific discovery, and technological achievements. These initiatives are covered in a long-term Mars Public Engagement Plan. Just as Mars missions have been organized into a program where each element strategically complements and builds on another, the Mars Public Engagement Plan creates a focused, cohesive, highly leveraged program in its collection of planned activities. Mars public engagement is conducted at the program level, covering missions scheduled for Mars destinations over the next two decades. This organization prevents the need to reinvent

the wheel with each mission, allows continuity in programming beyond the official end dates of missions, and provides the ability to develop strong, stable, and common infrastructures with long-term partners. The benefit of a 20-year plan is that public engagement initiatives will have time to bear fruit. Also, the contributions and discoveries of each mission can be intimately linked to the rich and compelling science and technology goals of the Mars Exploration Program for greater public understanding of what NASA seeks to achieve in its systematic exploration of Mars. (The term “public engagement” includes all formal education, informal education, and public information and outreach activities. Missions include Mariner 3–4 and 6–9, Viking 1 and 2, Mars Pathfinder, Mars Global Surveyor, Mars Odyssey, Mars Exploration Rovers, U.S. participation in Mars Express, Mars Reconnaissance Orbiter, and Mars Science Laboratory, as well as coordination with Mars Netlander, Mars Scout, and other Mars areas that receive their E/PO funding from other sources.)

URL: <http://mars.jpl.nasa.gov>

Activities: Mars: Classroom Visits [A298]
 Mars: Documentary Interviews [A415]
 Mars: Formal Educator Field Trips [A145]
 Mars: Formal Educator Workshops [A89]
 Mars: Imagine Mars [A299]
 Mars: Informal Educator Workshops [A379]
 Mars: Lectures at Museums and Other Informal Education Venues [A416]
 Mars: Mars Exploration Student Data Team [A300]
 Mars: Mars Robotics Education Partnership [A301]
 Mars: Mars Student Imaging Project [A302]
 Mars: Models and Exhibits [A358]
 Mars: Museum Visualization Alliance [A384]
 Mars: Public Talks [A417]
 Mars: Public Tours [A418]
 Mars: Rock Around the World [A419]
 Mars: Student Workshops [A303]
 Mars: Web Site Science, Engineering, and Educational Content Development [A477]
 Mars: Web Spotlights [A478]
 “MarsQuest” Planetarium Show [A359]
 “MarsQuest” Traveling Exhibit [A360]
 “Passport To The Solar System” (PTSS) [A228]
 “Science Concepts in Context” [A233]
 Space Science Workshops for Educators [A109]
 “To Mars with MER” [A501]

B98. 2001 Mars Odyssey

Description: The 2001 Mars Odyssey orbiter is mapping the mineralogy and morphology of the Martian surface. It is achieving global mapping of the elemental composition of the surface and the abundance of hydrogen in the shallow subsurface. (The 2001 Mars Odyssey was launched on April 7, 2001, and arrived at Mars on October 24, 2001.)

URL: <http://mars.jpl.nasa.gov/odyssey/>

Activities: “To Mars with MER” [A501]

B99. Mars Exploration Rover Mission

MER

Description: Two powerful new Mars rovers were sent on their way to the Red Planet. MER-A (Spirit) was launched on June 10, 2003, and MER-B (Opportunity) on July 7, 2003. MER-A landed on January 3, 2004, and MER-B on January 24, 2004. With far greater mobility than the 1997 Mars Pathfinder rover, these robotic explorers will be able to trek up to 100 meters (about 110 yards) across the surface each Martian day. Each rover will carry a sophisticated set of instruments that will allow it to search for evidence of liquid water that may have been present in the planet’s past. The rovers are identical to each other but will land on different regions of Mars.

URL: <http://mars.jpl.nasa.gov/classroom/>

Activities: “MarsQuest” Traveling Exhibit [A360]
 “Passport To The Solar System” (PTSS) [A228]
 “Science Concepts in Context” [A233]
 Space Science Workshops for Educators [A109]
 “To Mars with MER” [A501]

B100. Mars Global Surveyor

MGS

Description: The MGS is returning an unprecedented amount of data regarding the Martian surface features, atmosphere, and magnetic properties. Scientists are using the data gathered from this mission both to learn about Earth by comparing it to Mars and to build a comprehensive data set to aid in planning future missions. (The MGS was launched on November 7, 1996.)

URL: <http://mars.jpl.nasa.gov/mgs/>

Activities: “MarsQuest” Traveling Exhibit [A360]
 “Passport To The Solar System” (PTSS) [A228]

B101. Mars Pathfinder

Description: Mars Pathfinder launched December 2, 1996, and arrived on the surface of Mars on July 4, 1997. The mission was an engineering demonstration of key technologies and concepts for use in future missions to Mars; it also delivered science instruments to the surface of Mars to investigate the structure of the Martian atmosphere, its surface meteorology, its surface geology, its form and structure, and the elemental composition of Martian rocks and soil. A small, 10-kilogram (22-pound) rover was carried on the Pathfinder and became the first rover ever to explore the Martian surface. The last communication from the spacecraft was received on September 27, 1997, and the spacecraft was officially declared dead on March 10, 1998.

URL: <http://mpfwww.jpl.nasa.gov/default.html>

Activities: "Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]
"To Mars with MER" [A501]

B102. Mars Reconnaissance Orbiter

MRO

Description: MRO will focus on analyzing the surface at new scales in an effort to follow tantalizing hints of water detected in images from the Mars Global Surveyor spacecraft and to bridge the gap between surface observations and measurements from orbit. For example, the Reconnaissance Orbiter will measure thousands of Martian landscapes at 20- to 30-centimeter (8- to 12-inch) resolution, good enough to observe rocks the size of beach balls.

URL: <http://mars.jpl.nasa.gov/missions/future/2005-plus.html>

Activities: Compact Reconnaissance Imaging Spectrometer for Mars (CRISM): Public Outreach [A395]
CRISM: Curriculum Guide [A179]
CRISM: Cut-Out Paper Model [A180]
CRISM: Fact Sheet [A181]
CRISM: Web Site [A182]
MESSENGER: Student Support [A304]
New Horizons: Special Interest Groups and Scouts [A423]
"To Mars with MER" [A501]

B103. Mars Science Laboratory

MSL

Description: MSL is a roving, long-range, long-duration science laboratory that will be a major leap in surface measurements and pave the way for a future sample-return mission. NASA is studying options to launch this mobile science laboratory mission as early as 2007. This capability will also demonstrate the technology for "smart landers" with accurate landing and hazard-avoidance abilities to access what may be very promising but difficult-to-reach scientific sites.

URL: <http://solarsystem.nasa.gov/missions/profile.cfm?Sort=Chron&Mission=MarsSciLab>

Activities: "To Mars with MER" [A501]

B104. Viking

Description: NASA's Viking project found a place in history when it became the first mission to land a spacecraft safely on the surface of another planet. Two identical spacecraft, each consisting of a lander and an orbiter, were built. Each orbiter-lander pair flew together and entered Mars orbit; the landers then separated and descended to the planet's surface. The Viking 1 Lander touched down on the western slope of Chryse Planitia (the Plains of Gold), while the Viking 2 lander settled down at Utopia Planitia. Besides taking photographs and collecting other science data on the Martian surface, the two landers conducted three biology experiments designed to look for possible signs of life. These experiments discovered unexpected and enigmatic chemical activity in the Martian soil, but these provided no clear evidence for the presence of living microorganisms in the soil near the landing sites. According to scientists, Mars is self-sterilizing. They believe that the combination of solar ultraviolet radiation that saturates the surface, the extreme dryness of the soil, and the oxidizing nature of the soil chemistry prevent the formation of living organisms in Martian soil. The Viking mission was planned to continue for 90 days after landing. Each orbiter and lander operated far beyond its designed lifetime. The Viking 1 Orbiter functioned until July 25, 1978, while the Viking 2 Orbiter continued for 4 years and 1,489 orbits of Mars, concluding its mission on August 7, 1980. Because of the variations in available sunlight, both landers were powered by radioisotope thermoelectric generators-devices that create electricity from heat given off by the natural decay of plutonium. That power source allowed long-term science investigations that otherwise would not have been possible. The last data from the Viking 2 Lander arrived at Earth on April 11, 1980. The Viking 1 Lander made its final transmission to Earth on November 11, 1982.

URL: <http://www.jpl.nasa.gov/missions/past/viking.html>

Activities: "Passport To The Solar System" (PTSS) [A228]
"Science Concepts in Context" [A233]

New Frontiers

B105. New Horizons (Pluto-Kuiper Belt) Mission

Description: New Horizons is a mission to the unexplored edge of our solar system; it was designed to provide the first close look at Pluto, Charon, and their icy, rocky relatives in the Kuiper Belt. Scheduled to launch in 2006 and reach Pluto-Charon by 2015, New Horizons will be the first NASA planetary spacecraft in two decades to train its instruments on a "new" world. The New Horizons payload is designed to answer critical questions about Pluto, Charon, and the other unexplored bodies in the outer solar system, such as how the bodies look, what they are made of, and what their atmospheres are like. The mission plans to map surface appearance with visible-wavelength cameras, study surface composition by spectra in the near infrared, and probe atmospheres in detail with ultraviolet spectrometers and radio waves. The New Horizons E/PO plan includes educator training, education programs and curriculum modules, a mission Web site, broadcast events, student press conferences, and a guest observer program. Public awareness efforts include cosponsored lectures, informal programs, and exhibits at science museums nationwide. The E/PO program also includes the Student Dust Counter, a special instrument designed by students at the University of Colorado at Boulder. The device, which will detect dust grains produced by collisions between asteroids, comets, and Kuiper Belt objects during New Horizons' journey, will be the first science instrument on a NASA planetary mission to be designed, built, and flown by students.

Lead: Ms. Kerri Beisser, Johns Hopkins University Applied Physics Laboratory, 11100 Johns Hopkins Road, Laurel, MD 20723-6099. E-mail: kerri.beisser@jhuapl.edu. Phone: 443-778-6050.

URL: <http://www.pluto.jhuapl.edu/>

Activities: MESSENGER: Student Support [A304]
 New Horizons: Fact Sheet [A223]
 New Horizons: Growth Chart Poster [A224]
 New Horizons: Public Outreach [A422]
 New Horizons: Special Interest Groups and Scouts [A423]
 New Horizons: Student Support [A309]
 New Horizons: Teacher Support [A97]
 New Horizons: Web Site [A225]
 Pluto or Bust! [A229]
 Space Place: Contributions to ITEA's "The Technology Teacher" [A242]
 Space Place: Contributions to Newspapers [A490]
 TIMED: Teacher Support [A123]

Discovery

B106. Discovery Program Support Office

DPSO

Description: NASA's Discovery program is composed of a series of highly focused, competitively selected planetary science investigations. Discovery missions aim to enhance our understanding of the solar system by exploring the planets, their moons, and other small bodies using innovative approaches to ensure the highest science value for the cost. Ten missions have been selected since the program began in 1992. Discovery program E/PO efforts are designed to promote the program and awareness of the missions. This is done through a Web site, a quarterly newsletter, outreach products and informational materials developed for a variety of audiences, and presentations given in various venues. The Discovery program works with Discovery mission E/PO personnel to identify and develop E/PO opportunities, coordinate with the program, and ensure that mission activities are consistent with NASA SMD E/PO strategy.

Lead: Ms. Shari Asplund, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109.
 E-mail: shari.e.asplund@jpl.nasa.gov. Phone: 818-354-7280.

URL: <http://discovery.nasa.gov>

Activities: Discovery Program Office: Miscellaneous [A464]
 Discovery Program: Conferences [A53]
 "Passport To The Solar System" (PTSS) [A228]

B107. Comet Nucleus Tour

CONTOUR

Description: The E/PO efforts of the CONTOUR mission have been aimed at bringing the thrill of exploration and the wonder of discovery into classrooms and homes through unique educational experiences. We invite teachers, students, and the public to participate in scientific inquiry, discovery, and insight into the complex and awesome nature of comets. Through media, the Internet, and classroom curricula we reach out to the educational community and the public to inspire their curiosity and satisfy their interest in the study of comets. Although the CONTOUR spacecraft was lost, information on the mission science, education, and outreach continues to be made available.

Lead: Ms. Laura Lautz, Cornell University, 310 Space Sciences Building, Ithaca, NY 14853.
 E-mail: lautz@astro.cornell.edu. Phone: 607-254-4973.

URL: <http://www.contour2002.org/>

Activities: "Passport To The Solar System" (PTSS) [A228]

B108. Deep Impact

Description: The Deep Impact mission outreach plan specializes in five audiences: educators, students, the public (including informal), the underserved, and amateur astronomers.

Lead: Dr. Lucy McFadden, University of Maryland, Department of Astronomy, College Park, MD 20742.

E-mail: McFadden@astro.umd.edu. Phone: 301-405-2081.

URL: <http://deepimpact.jpl.nasa.gov>

Activities: Deep Impact: Amateur Astronomers Partnership [A397]

Deep Impact: Educator Training [A51]

Deep Impact: Public/Informal Events [A398]

Deep Impact: Web Site [A463]

Space Place: Contributions to Newspapers [A490]

B109. MErcury Surface, Space ENvironment, GEochemistry, and Ranging**MESSENGER**

Description: MESSENGER is a scientific investigation of the planet Mercury. Understanding Mercury and the forces that have shaped it is fundamental to understanding the terrestrial planets and their evolution. MESSENGER is a mission to orbit Mercury following two flybys of that planet. MESSENGER will investigate key scientific questions regarding Mercury's characteristics and environment during these two complementary mission phases. Data will be provided by an optimized set of miniaturized space instruments and the spacecraft's telecommunications system. MESSENGER will enter Mercury's orbit in April 2009 and carry out comprehensive measurements for 1 year. Data collection will conclude in April 2010. Working in close coordination with the mission's science team, a carefully selected group of E/PO professionals has been designing a comprehensive set of activities to coordinate with MESSENGER events. The activities are designed for college education and public interest. These activities include teacher training, curriculum development, unique student investigations and experiments related to MESSENGER, a television documentary, museum displays, and special outreach to underserved and minority students. The full multifaceted E/PO program is carried out with an extensive network of individual and institutional partners throughout the country. The E/PO effort is organized around overarching themes that reflect the science, engineering, technology, and people of the mission. The MESSENGER themes are Comparative Planetology, The Solar System Through History, and Framing Pathways to Answers: The Scientific Process in Action. The thematic framework is also informed by both content and pedagogy standards articulated in the National Science Education Standards and Benchmarks for Science Literacy. For the duration of the mission, the E/PO team will create and disseminate materials that focus on telling MESSENGER's many stories to a broad and diverse audience.

Lead: Ms. Stephanie Stockman, Science Systems and Applications, Inc., 5900 Princess Garden Parkway, Suite 300, Lanham, MD 20706. Phone: 301-614-6457.

URL: <http://messenger.jhuapl.edu>

Activities: MESSENGER Educator Fellowship Program [A92]

MESSENGER: NASA Explorer Institute [A380]

MESSENGER: National Meetings [A420]

MESSENGER: Student Support [A304]

New Horizons: Special Interest Groups and Scouts [A423]

"Passport To The Solar System" (PTSS) [A228]

"Staying Cool" Training Workshop [A113]

Sun-Earth Day-Ancient Observatories-Timeless Knowledge [A440]

Testing Ideas About Light [A120]

TIMED: Teacher Support [A123]

B110. Near-Earth Asteroid Rendezvous**NEAR**

Description: As the first spacecraft to orbit and land on an asteroid, the NEAR mission continues to answer fundamental questions about the nature and origin of near-Earth objects. These objects are the primary source of large bodies that collide with Earth, and primitive asteroids, comets, and meteorites also preserve clues about the nature of early solar system processes and conditions. These clues have been altered or destroyed on large, planet-size bodies by processes of planetary evolution. (NEAR was launched in February 1996; asteroid landing and final communication occurred in February 2001.)

URL: <http://near.jhuapl.edu/>

Activities: MESSENGER: Student Support [A304]

New Horizons: Special Interest Groups and Scouts [A423]

"Passport To The Solar System" (PTSS) [A228]

"Science Concepts in Context" [A233]

TIMED: Teacher Support [A123]

B111. Stardust

Description: The Stardust education Web site is designed to enhance the breadth, flexibility, and knowledge of science, mathematics, and technology between K-12 education and higher education, recognizing and supporting a diverse set of programs while improving scientific literacy among students. The materials found on this home page are aligned with the National Science Education Standards and have been designed primarily for use by grades 5-8. The Stardust E/PO team is composed of many partners, which include the Challenger Center

for Space Science Education, the JASON Foundation for Education; Omniplex at the Kirkpartick Science and Air Space Museum; Space Explorers, Inc.; the Virginia Space Grant Consortium; Parents And Children as Co-Travelers (PACCT); NASA's Jet Propulsion Laboratory (JPL) Ambassadors Program; the JPL Solar System Educator Program; the "From the Sun to the Star Nations" Native American outreach initiative; and Space Place. The Stardust mission participates in and sponsors teacher training and curriculum development programs targeted to minorities and underserved communities, along with the public at large. Other resources available include an interactive Web site, an educational planetarium program, video animation, and library and museum exhibits.

Lead: Ms. Aimee Meyer, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109.
E-mail: aimee.meyer@jpl.nasa.gov. Phone: 818-354-3245.

Contact: Ms. Aimee Meyer, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109.
E-mail: aimee.l.whalen@jpl.nasa.gov. Phone: 818-354-3245.

URL: <http://stardust.jpl.nasa.gov>

Activities: "Science Concepts in Context" [A233]
Space Place: Contributions to "National Association for Bilingual Education (NABE) News" [A489]
Space Place: Contributions to Newspapers [A490]
Space Place: Web Site [A243]

Other NASA Programs

B112. Astromaterials Program

Description: The Astromaterials program at NASA's Johnson Space Center curates and distributes samples of other bodies in the solar system to researchers around the world. Astromaterials include samples collected by NASA missions (e.g., Apollo Moon rocks, Genesis solar wind ions, and Stardust comet particles) and samples collected on Earth (e.g., meteorites from Antarctica and cosmic dust from the stratosphere). Astromaterials E/PO focuses on the scientific study of extraterrestrial materials and their use in education. The program is based on collaboration between scientists at Johnson and educators. A long-term example is the distribution of lunar and meteorite samples to schools through partnerships with the NASA Office of Education. Recent major projects include (1) development of classroom activities in partnership with K-12 teachers and the presentation of the activities in teacher workshops, (2) collaboration with two minority universities on a Houston-wide outreach program, and (3) development of exhibits and planetarium shows in partnership with museums.

Lead: Dr. Marilyn Lindstrom, NASA Johnson Space Center, 2101 NASA Road 1, Houston, TX 77058.
E-mail: marilyn.lindstrom-1@nasa.gov. Phone: 281-483-5135.

URL: <http://curator.jsc.nasa.gov>

Activities: "Exploring the Solar System": Teacher Workshops [A59]

B113. Deep Space 1

DS1

Description: The Space Place has involved DS1 in the following events/activities: We attend conferences to promote Space Place and all of the projects involved with the Web site. Usually, mission- or Space Place-provided display materials, an activity guide, and handouts for an original group activity. Through these partnerships, we promote the Space Place Web site and NASA Jet Propulsion Laboratory missions. Club Space Place provides quarterly interdisciplinary hands-on activities that are space- or Earth science-related. These quarterly activities go to the Space Place library and museum partners, Boys & Girls Clubs of America, the YWCA, and the Civil Air Patrol. Currently, there are 272 partners reaching thousands of children. On a monthly basis, Space Place provides articles for over 20 newspapers nationwide in both English and Spanish. The combined readership for these newspapers totals more than 2.5 million. The articles end with information on activities and links to the Space Place Web site and NASA mission Web sites. Diane Fisher submits articles to "Technology and Children" magazine four times a year and to "The Technology Teacher" magazine eight times a year. Each article published under the Space Place insignia refers to a particular mission. "Technology and Children" reaches an estimated 1,400 teachers and their students (up to 42,000 children), and "The Technology Teacher" reaches an estimated 8,000 teachers and their students (up to 224,000 children). Each article is also posted on ITEA's Web site, which reaches an even wider audience. The Space Place Web site is a dynamic site that offers interactive experiences and fun facts for children and adults. Space Place is supported by the New Millennium program.

Lead: Ms. Nancy Leon, NASA Jet Propulsion Laboratory, M/S 171-350, 4800 Oak Grove Drive, Pasadena, CA 91109.
E-mail: Nancy.J.Leon@jpl.nasa.gov. Phone: 818-354-1067.

URL: <http://spaceplace.nasa.gov>

Activities: "Passport To The Solar System" (PTSS) [A228]

B114. Deep Space Mission System

DSMS

Description: The DSMS incorporates the Deep Space Network (DSN) and the infrastructure, software, and systems that support it. The goal of the DSMS E/PO is to build awareness of the critical role communication plays in solar system exploration. Without a means of communicating between spacecraft and Earth to relay commands and return science data, there could be no exploration. Frequent collaborations with NASA JPL missions using the DSMS tell this story, while previously produced printed materials and videos are distributed to educators and

to the public to offer further explanation. DSMS partners with JPL programs (Solar System Ambassadors, Solar System Educators, and a Native American initiative) to provide wider distribution of information and educational activities. The DSN is also used for science observation through radio astronomy, and one of the decommissioned 34-meter antennas is now part of an innovative educational program, the Goldstone Apple Valley Radio Telescope (GAVRT). Students can control this huge antenna via the Internet from their classrooms to gather and analyze data that are ultimately used by scientists at JPL.

Lead: Ms. Shirley Wolff, NASA Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109.

E-mail: shirley.e.wolff@jpl.nasa.gov. Phone: 818-354-4069.

URL: <http://deepspace.jpl.nasa.gov/dsn>

Activities: Deep Space Network (DSN): Educational Activities [A52]
 Deep Space Network (DSN): Public Events [A399]
 GAVRT: Classroom Implementation-Cassini Mission [A275]
 GAVRT: Classroom Implementation-Jupiter Quest [A276]
 GAVRT: Classroom Implementation-Quasar Variability Study [A277]
 GAVRT: Classroom Implementation-Uranus [A278]
 GAVRT: Educational Conferences and Outreach Activities [A62]
 GAVRT: Scientist/Student Teleconferences [A279]
 GAVRT: Teacher Training [A63]
 Goldstone Communications Complex: Educational Activities [A281]
 Goldstone Communications Complex: Public Tours [A405]
 Goldstone Communications Complex: Student Tours [A282]
 Goldstone Deep Space Communications Complex: Public Outreach [A406]

International Missions with NASA Participation

B115. Mars Express

Description: NASA is participating in a mission planned by the European Space Agency and the Italian Space Agency called Mars Express, which will explore the atmosphere and surface of Mars from polar orbit. NASA's involvement includes joint development of the radar instrument with the Italian Space Agency, support of U.S. science co-investigators, coordination of radio relay systems to make sure that different spacecraft will operate with each other, a hardware contribution to the energetic neutral atoms analyzer instrument, and the provision of backup tracking support during critical mission phases by NASA's Deep Space Network. Our contribution to the energetic neutral atoms analyzer instrument is called Analyzer of Space Plasma and Energetic Atoms (ASPERA)-3. ASPERA-3 was selected as a Discovery mission of opportunity; the complete instrument will study the interaction between the solar wind and the atmosphere of Mars, and it will attempt to determine what happened to the large amount of water that was once on Mars. The co-investigator being funded by NASA is Dr. David Winningham of the Southwest Research Institute, San Antonio, TX.

Activities: "MarsQuest" Traveling Exhibit [A360]

APPENDIX C. Contributing Scientists, Technologists, and Support Personnel

The NASA Science Mission Directorate is pleased to acknowledge the more than 1,000 SMD affiliated, scientists, technologists, and support personnel who contributed to the development of Education and Public Outreach (E/PO) products and conducting E/PO activities in FY 2005. The names and affiliations of these dedicated individuals are listed below. The numbers in brackets refer to the specific products and activities in appendix A to which the individuals contributed.

Dr. Michael A'Hearn	University of Maryland	[A398]
Dr. Dan Aafedt	Ball Aerospace Technologies Corporation	[A510]
Ms. Wendy Ackerman	Maryland Science Center	[A356]
Mr. Arden Acord	NASA Jet Propulsion Laboratory	[A415]
Mr. Chuck Acton	NASA Jet Propulsion Laboratory	[A417]
Mr. David Acton	Ball Aerospace Technologies Corporation	[A398]
Dr. Mario Acuna	NASA Goddard Space Flight Center	[A420]
Dr. Mitzi Adams	NASA Marshall Space Flight Center	[A240, A247, A500]
Mr. Jeff Adkins	Deer Valley High School	[A64, A403]
Mr. Mark Adler	NASA Jet Propulsion Laboratory	[A415, A417]
Ms. Lori Agan	Wheaton College	[A218]
Mr. Hrand Aghazarian	NASA Jet Propulsion Laboratory	[A417]
Dr. Eric Agol	University of Washington	[A9]
Mr. Jaime Ahumada	Arizona State University	[A89, A417]
Dr. Ayodele Aina	Cheyney University of Pennsylvania	[A19]
Ms. Lucy Albert	Space Telescope Science Institute	[A346, A472]
Dr. John D. Albertson	Duke University	[A8]
Mr. Roberto Aleman	NASA Goddard Space Flight Center	[A101]
Dr. Claudia Alexander	NASA Jet Propulsion Laboratory	[A267]
Dr. Conel Alexander	Carnegie Institution of Washington	[A3]
Dr. David Alexander	Lockheed Martin Solar and Astrophysics Laboratory	[A118]
Mr. Bryan Allen	NASA Jet Propulsion Laboratory	[A417]
Dr. Carlton Allen	University of Arizona	[A387, A470]
Dr. Carlton C. Allen	NASA Johnson Space Center	[A89, A303, A379, A470]
Dr. Dave Allen	University of Wyoming	[A312]
Ms. Jaclyn Allen	Lockheed Martin Corporation	[A53, A59, A89, A298, A299, A303, A379, A387, A417, A418, A462, A470]
Dr. Ron Allen	Space Telescope Science Institute	[A437]
Dr. Carlos Allende	University of Texas at Austin	[A485]
Dr. Richard Alley	Pennsylvania State University	[A267]
Mr. Scott Allison	Arizona State University	[A89]
Dr. Richard Allmendinger	Cornell University	[A8]
Ms. Erica Alston	NASA Langley Research Center	[A222]
Mr. E. Brian Alvarez	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Faulk Amelung	University of Miami	[A8]
Dr. Kwesi Amoa	City University of New York (CUNY) Medgar Evers College	[A27]
Dr. Emmanouil N. Anagnostou	University of Connecticut	[A8]
Dr. Bob Anderson	NASA Jet Propulsion Laboratory	[A299, A417]
Dr. Bruce Anderson	Boston University	[A8]
Dr. James G. Anderson	Harvard University	[A8]
Mr. Robert Anderson	Nogales High School	[A417]
Dr. Vassilis Angelopoulos	University of California, Berkeley	[A121]
Mr. Nigel Angold	NASA Jet Propulsion Laboratory	[A327]
Ms. Andrea Angrum	NASA Jet Propulsion Laboratory	[A327, A440, A444, A445, A502, A503]
Dr. Spiro Antiochos	University of Michigan	[A9]
Mr. Jessie Antonellis	University of Arizona	[A102]
Mr. Michael Arida	NASA Goddard Space Flight Center	[A451, A471]
Mr. Robert Arian	Lewis Center for Educational Research	[A63]
Mr. Thomas Arnold	State College High School	[A81, A320, A441]
Dr. Kevin Arrigo	Stanford University	[A8]
Dr. Raymond Arvidson	Washington University	[A415, A478]
Mr. Scott Askew	NASA Johnson Space Center Astronomical Society	[A98]
Dr. Erik Asphaug	University of California, Santa Cruz	[A9]
Ms. Shari Asplund	NASA Jet Propulsion Laboratory	[A53, A59, A64, A81, A104, A464]
Mr. Kirk Astroth	4-H Montana	[A312]
Dr. David Atkinson	University of Idaho	[A392, A427]

Dr. David J. Atkinson	NASA Jet Propulsion Laboratory	[A267, A392]
Mr. Brion Au	NASA Johnson Space Center	[A54]
Dr. Shermane Austin	City University of New York (CUNY) Medgar Evers College.	[A20, A27, A31]
Dr. Roni Avissar	Duke University	[A8]
Mr. Ron Baalke	NASA Jet Propulsion Laboratory	[A417, A478]
Dr. Dana Backman	NASA Ames Research Center	[A38, A54, A106, A155, A215, A236, A264, A429, A430, A431, A448, A452, A472, A488]
Mr. Enrique Baez	NASA Jet Propulsion Laboratory	[A298, A417]
Dr. Fred Baganoff	Massachusetts Institute of Technology	[A131]
Dr. Fran Bagenal	University of Colorado, Boulder	[A309, A422, A423]
Mr. Erik Bailey	NASA Jet Propulsion Laboratory	[A89, A108, A417]
Dr. Scott Bailey	University of Alaska, Fairbanks	[A9]
Mr. Darren Baird	NASA Jet Propulsion Laboratory	[A417]
Mr. Alireza Bakhshi	NASA Jet Propulsion Laboratory	[A417]
Dr. Bob Balaram	NASA Jet Propulsion Laboratory	[A298]
Dr. Dennis Baldocchi	University of California, Berkeley	[A8]
Dr. Tibor Balint	NASA Jet Propulsion Laboratory	[A10]
Dr. Sally Baliunas	Harvard-Smithsonian Center for Astrophysics.	[A240]
Ms. Jennifer Ballestrea	Arizona State University	[A89]
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Dr. Katherine Barbeau	Scripps Institution of Oceanography	[A4]
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Ms. Beth Barbier	NASA Goddard Space Flight Center	[A128, A450, A451, A469, A471, A518]
Dr. Louis Barbier	NASA Goddard Space Flight Center	[A20, A128]
Mr. Jack Barengoltz	NASA Jet Propulsion Laboratory	[A417]
Mr. Philip Barker	Los Alamos National Laboratory	[A142]
Mr. Timothy Barker	Wheaton College	[A158]
Ms. Chikia Barnes	NASA Goddard Space Flight Center	[A6]
Dr. Olivier Barnouin-Jha	Johns Hopkins University Applied Physics Laboratory.	[A5]
Ms. Lynn Barranger	Space Telescope Science Institute	[A472]
Dr. Daniel Barry	NASA Johnson Space Center	[A158]
Dr. Mary Barsony	Space Science Institute	[A335]
Ms. Lindsay Bartolone	Adler Planetarium and Astronomy Museum	[A37, A105, A132, A356, A518]
Dr. Jeffrey Basara	University of Oklahoma.	[A4]
Dr. Gibor Basri	University of California, Berkeley	[A40, A124, A393, A510]
Dr. Deborah Bass	NASA Jet Propulsion Laboratory	[A415, A417, A501]
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Mr. Todd Bayer	NASA Jet Propulsion Laboratory	[A417]
Ms. Erica Beam	NASA Jet Propulsion Laboratory	[A417]
Mr. Doug Beasley	NASA Jet Propulsion Laboratory	[A415]
Mr. Kelly Beatty	"Sky & Telescope" magazine	[A338]
Dr. Brad Bebout	NASA Ames Research Center	[A335]
Dr. Jill Bechtold	University of Arizona.	[A509]
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Dr. John G. Beck	Stanford University.	[A299, A315, A415, A417]
Ms. Kelly Beck	Stanford University.	[A238]
Dr. Bernhard Beck-Winchatz	DePaul University	[A31, A132, A316, A382, A491]
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Ms. Kate Becker	University of Colorado, Boulder.	[A97]
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Mr. Luke Becker	Johns Hopkins University Applied Physics Laboratory.	[A309, A317]
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Dr. Steven Beckwith	Space Telescope Science Institute	[A427]
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Mr. David Beier	Hawthorn Hill Elementary School	[A47, A81]

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Ms. Marni Berendsen	Astronomical Society of the Pacific	[A365]
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Dr. Troy Bergstrom	Ball Aerospace Technologies Corporation	[A510]
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Dr. Joe Andrew Berry	Stanford University	[A8]
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Dr. Omer Blaes	University of California, Santa Barbara	[A1]
Dr. Roger Blandford	California Institute of Technology (Caltech)	[A1]
Dr. Diana Blaney	NASA Jet Propulsion Laboratory	[A299, A417]
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Dr. Jeremy Bloxham	Harvard University	[A8]
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Dr. William Bottke	Southwest Research Institute	[A41]
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Mr. Ken Bower	Stanford University	[A271, A499]
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Ms. Cassie Bowman	NASA Ames Research Center	[A299]
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Dr. Patricia Boyd	NASA Goddard Space Flight Center	[A42]
Mr. Kobie Boykins	NASA Jet Propulsion Laboratory	[A89, A98, A299, A478, A501]
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Dr. Neil Brandt	Pennsylvania State University	[A46, A81]
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Dr. John Carlson	University of Maryland	[A90]
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Mr. Donald Carson	NASA Goddard Space Flight Center	[A433]
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Dr. Oliver Chadwick	University of California, Santa Barbara	[A8]
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Dr. David Charbonneau	Harvard-Smithsonian Center for Astrophysics	[A55]
Dr. Jane Charlton	Pennsylvania State University	[A46, A81]
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Ms. Tiffany Chiu	NASA Jet Propulsion Laboratory	[A470]
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Dr. Phil Christensen	Arizona State University	[A89, A145, A415, A417, A478]
Ms. April Christenson	University of Idaho	[A245]
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Dr. Tom Chun	Institute for Astronomy	[A98]
Dr. Christopher Churchill	New Mexico State University, Las Cruces	[A9]
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Dr. Todd Clancy	Space Science Institute	[A189]
Ms. Kerry Clark	Space Telescope Science Institute	[A472]
Dr. Allan Clarke	Florida State University	[A8]
Dr. Antony D. Clarke	University of Hawaii at Manoa	[A8]
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Ms. Cathleen Clemens	Museum of Science	[A95, A96, A170, A483, A515]
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Dr. Laird Close	University of Arizona	[A9]
Ms. Emily CoBabe-Ammann	University of Colorado, Boulder	[A442]
Dr. Anita Cochran	University of Texas at Austin	[A377]
Dr. William Cochran	McDonald Observatory	[A377]
Dr. Mark Cochrane	Michigan State University	[A4]
Dr. George Cody	Carnegie Institution of Washington	[A3]
Dr. Liza Coe	NASA Ames Research Center	[A100]
Dr. Christina Cohen	California Institute of Technology (Caltech)	[A240, A390]
Ms. Ellen Cohen	NASA Headquarters	[A423]
Mr. Morris Cohen	Stanford University	[A238]
Dr. Warren Cohen	Oregon State University	[A8]
Dr. Tony Colaprete	NASA Ames Research Center	[A189]
Dr. Peter Colarco	University of Maryland at Baltimore County	[A4]
Dr. Paul Coleman	University of Hawaii at Hilo	[A98, A356]
Dr. Sol Colina-Trujillo	NASA Goddard Space Flight Center	[A6]
Ms. Rebecca Collier	NASA Johnson Space Center	[A89]
Mr. Steve Collins	NASA Jet Propulsion Laboratory	[A415]
Ms. Jessica Collisson	NASA Jet Propulsion Laboratory	[A415]
Mr. Gilberto Colon	NASA Goddard Space Flight Center	[A6, A101, A144, A433]
Dr. Lynn Cominsky	Sonoma State University	[A64, A261, A272, A388, A403, A441]
Dr. Richard Conant	Colorado State University	[A8]
Dr. James Connell	University of New Hampshire	[A125]
Dr. Pamela Conrad	NASA Jet Propulsion Laboratory	[A470]
Mr. Steve Conrad	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Kerry Cook	Cornell University	[A8]
Ms. Denise Cook-Clampert	Ball Aerospace Technologies Corporation	[A398]
Mr. Brian Cooper	NASA Jet Propulsion Laboratory	[A298]
Dr. Larry Cooper	NASA Headquarters Science Mission Directorate	[A462, A518]
Mr. David Coppedge	NASA Jet Propulsion Laboratory	[A392]
Mr. Peter Coppin	Carnegie Mellon University	[A375]
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Ms. Carmen Cortinas	Goldstone Deep Space Communications Complex	[A281]
Dr. Jean Cottam	NASA Goddard Space Flight Center	[A469]
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Dr. Nahide Craig	University of California, Berkeley	[A105, A114, A115, A118, A121, A122, A439, A472, A518, A520]

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Dr. Joy Crisp	NASA Jet Propulsion Laboratory	[A267, A415, A417, A418, A470, A478]
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Dr. Larry Crumpler	New Mexico Museum of Natural History and Science	[A478]
Dr. Ivan Csiszar	University of Maryland	[A4]
Dr. Kurt Cuffey	University of California, Berkeley	[A8]
Dr. Kent Cullers	Institute for Astronomy	[A312]
Mr. Jay Cummings	NASA Goddard Space Flight Center	[A451]
Dr. LuAnne Dahlman	TERC	[A462]
Dr. Daniel Dale	University of Wyoming	[A312, A332]
Ms. Laura Dalles	University of Wyoming	[A104]
Ms. Sandra Daly	Harvard-Smithsonian Center for Astrophysics	[A518]
Dr. Lydia Dambekalns	University of Wyoming	[A47]
Mr. Ed Danielson, Jr.	NASA Jet Propulsion Laboratory	[A10]
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Ms. Honora Dash	John Dewey High School	[A27, A97]
Mr. Grady Daub	Arizona State University	[A419]
Dr. Paul Davidovits	Boston College	[A8]
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Ms. Anita Davis	NASA Goddard Space Flight Center	[A83]
Ms. Mary Davis	Arizona State University	[A89, A302, A303, A417, A418]
Ms. Eda Davis-Butts	Oregon State University	[A98]
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Dr. Craig De Forest	Southwest Research Institute	[A267]
Dr. Roelof de Jong	Space Telescope Science Institute	[A437]
Mr. Robert G. Deen	NASA Jet Propulsion Laboratory	[A298, A478]
Dr. Ruth DeFries	University of Maryland	[A8]
Mr. William Deininger	Ball Aerospace Technologies Corporation	[A510]
Dr. Eric DeJong	NASA Jet Propulsion Laboratory	[A10, A415, A470]
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Dr. Brian Dempsey	Pennsylvania State University	[A16]
Ms. Donna Deng	George Mason University	[A12]
Ms. Meixia Deng	George Mason University	[A12]
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Ms. Angela DesJardins	Montana State University	[A312]
Mr. Freeman Deutsch	Harvard-Smithsonian Center for Astrophysics	[A305]
Ms. Edna DeVore	Search for Extraterrestrial Intelligence (SETI) Institute	[A82, A100, A106, A429, A488, A510, A513]
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Dr. Liping Di	George Mason University	[A12]
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Dr. Harriet Dinerstein	McDonald Observatory	[A377]
Dr. Roseanne DiStefano	Tufts University	[A158]
Mr. Robert Dobyns	Johns Hopkins University Applied Physics Laboratory	[A317, A423]
Ms. Emily Dodd	University of Hawaii at Hilo	[A98]
Dr. Paul Doherty	Exploratorium	[A51]
Ms. Erin Dokter	University of Arizona	[A514]
Dr. James Dolan	University of Southern California	[A8]
Dr. Andrew Dombard	Johns Hopkins University Applied Physics Laboratory	[A5]
Dr. Megan Donahue	Space Telescope Science Institute	[A356]
Dr. Andrea Donnellan	NASA Jet Propulsion Laboratory	[A470]

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Mr. David Doody	NASA Jet Propulsion Laboratory	[A392]
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Dr. Steven Louis Dorobek	Texas A&M University	[A8]
Dr. Adriane Dorrington	NASA Langley Research Center	[A462]
Mr. Chuck Dovale	NASA Kennedy Space Center	[A415]
Ms. Sharla Dowding	Newcastle High School	[A64]
Mr. Rich Dragonajtys	NASA Ames Research Center	[A264]
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Ms. Mary Drake	NASA Johnson Space Center	[A89]
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Dr. James Driy	University of Houston-Downtown	[A387]
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Ms. Marianne Dunne	Cambridge Public School District	[A95]
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Dr. Richard Durisen	Indiana University, Bloomington	[A9]
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Ms. Jaime Dyk	NASA Jet Propulsion Laboratory	[A89, A416, A470]
Mr. Omar Eaton	NASA Goddard Space Flight Center	[A43, A86, A144, A404, A433, A434, A435]
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Dr. Scott Edgington	NASA Jet Propulsion Laboratory	[A267, A392]
Dr. Peter Edmonds	Harvard-Smithsonian Center for Astrophysics	[A170]
Mr. Christopher Edwards	Arizona State University	[A419]
Dr. Katrina Edwards	Marine Biological Laboratory	[A3]
Dr. Teon Edwards	TERC	[A95]
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Mr. Jonathan Eisenhamer	Space Telescope Science Institute	[A472]
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Dr. Charles Elachi	NASA Jet Propulsion Laboratory	[A417, A470, A513]
Ms. Ann Marie Eldering	NASA Jet Propulsion Laboratory	[A470]
Dr. Erica Ellingson	University of Colorado, Boulder	[A468]
Dr. Heather Elliott	Southwest Research Institute	[A334]
Ms. Kristen Ellis	NASA Jet Propulsion Laboratory	[A417]
Dr. Don Ellison	North Carolina State University	[A73]
Ms. Amy Ellwein	University of New Mexico	[A462]
Dr. Martin Elvis	Harvard-Smithsonian Center for Astrophysics	[A461]
Ms. Kimberly Ennico	NASA Ames Research Center	[A38]
Ms. Heather Enos	University of Arizona	[A415]
Mr. John Ensworth	Institute for Global Environmental Strategies	[A54]
Dr. Dara Entekhabi	Massachusetts Institute of Technology	[A8]
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Dr. Pat Esposito	NASA Jet Propulsion Laboratory	[A477]
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Mr. Tom Estill	Chabot Space and Science Center	[A129, A333, A398, A447]
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Dr. Nancy Evans	Harvard-Smithsonian Center for Astrophysics	[A95]
Dr. Neal Evans	University of Texas at Austin	[A9, A377]
Dr. Robin Evans	Gibbel Corporation	[A509]
Dr. Tim Ewers	University of Idaho	[A245]
Dr. Guiseppina Fabbiano	Harvard-Smithsonian Center for Astrophysics	[A461]
Dr. William Fagan	University of Maryland	[A8]
Dr. James Famiglietti	University of California, Irvine	[A8]
Dr. Xiaohui Fan	University of Arizona	[A396]
Dr. Jack Farmer	Arizona State University	[A478]
Dr. Tony Farnham	University of Maryland	[A398]
Dr. James Farquhar	University of Maryland	[A267]
Dr. William Farrand	Space Science Institute	[A189, A417]

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Ms. Sally Feldman	University of California, Berkeley	[A103, A115]
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Dr. Harry Ferguson	Space Telescope Science Institute	[A409, A437]
Ms. Nayla Fernandez	NASA Jet Propulsion Laboratory	[A470]
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Mr. Paul Fieseler	NASA Jet Propulsion Laboratory	[A415]
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Ms. Tara Fisher	Arizona State University	[A89]
Dr. Jack Fishman	NASA Langley Research Center	[A65]
Mr. A. Fitzsimmons	Maui Community College	[A98]
Dr. Kathryn Flanagan	Massachusetts Institute of Technology	[A267]
Dr. Tom Fleming	University of Arizona	[A396]
Dr. Greg Fletcher	University of Michigan	[A267]
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Mr. Clay Flinn	Patrick Air Force Base	[A415]
Dr. Jeffery Flosi	University of Houston-Downtown	[A387]
Dr. John Flowers	City University of New York (CUNY) Medgar Evers College	[A27]
Dr. Luke Flynn	University of Hawaii at Manoa	[A8]
Dr. Adam Fontecchio	Drexel University	[A4]
Ms. Leslie Foor	Space Telescope Science Institute	[A472]
Dr. Jeffrey Forbes	University of Colorado, Boulder	[A9]
Mr. Keven Forbes	Ball Aerospace Technologies Corporation	[A398]
Mr. Mike Ford	Holton High School	[A64]
Dr. William Forman	Harvard-Smithsonian Center for Astrophysics	[A472]
Dr. Richard Forster	University of Utah	[A4]
Dr. Jonathan Fortney	NASA Ames Research Center	[A5]
Dr. Efi Foufoula-Georgiou	University of Minnesota	[A8]
Mr. Glen Fountain	Johns Hopkins University Applied Physics Laboratory	[A97, A309]
Dr. George Fox	University of Houston	[A376]
Dr. Nicola Fox	Johns Hopkins University Applied Physics Laboratory	[A240, A309]
Dr. Andrew Fraknoi	Astronomical Society of the Pacific	[A11, A514]
Ms. Zoe Frank	Lockheed Martin Solar and Astrophysics Laboratory	[A323, A443]
Ms. Brenda Franklin	NASA Jet Propulsion Laboratory	[A417]
Ms. Mandy Frantti	Munising Public Schools	[A84]
Ms. Renee Frappier	University of California, Berkeley	[A383, A439, A440]
Ms. Lisa Frattare	Space Telescope Science Institute	[A472]
Ms. Amy Fredericks	Massachusetts Institute of Technology	[A451]
Mr. Lloyd French	NASA Jet Propulsion Laboratory	[A267]
Dr. Nancy French	Michigan Tech Research Institute	[A4]
Dr. Ann Fridlind	NASA Ames Research Center	[A4]
Mr. Barry Fried	John Dewey High School	[A27, A97]
Mr. Jay Friedlander	NASA Goddard Space Flight Center	[A373]
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Dr. Inez Fung	University of California, Berkeley	[A8]
Ms. Sangeeta Gad	University of Houston-Downtown	[A387]
Dr. Eric Gaidos	University of Hawaii at Manoa	[A3]
Mr. Charles Galindo	NASA Johnson Space Center	[A387]
Dr. Dennis Gallagher	NASA Marshall Space Flight Center	[A247]
Ms. Debbie Galloway	NASA Headquarters	[A511]
Mr. Anthony Ganino	NASA Jet Propulsion Laboratory	[A89]
Dr. Matteo Garbelotto	University of California, Berkeley	[A8]

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Ms. Carolyn Garcia	University of Wyoming	[A312]
Mr. Enrique Garcia	NASA Jet Propulsion Laboratory	[A243]
Mr. Javier Garcia	University of Texas at Brownsville	[A387]
Dr. Leonard Garcia	NASA Goddard Space Flight Center	[A373, A439]
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Mr. Michael Garrett	NASA Jet Propulsion Laboratory	[A89, A301, A417]
Dr. James Garrison	Purdue University	[A4, A8]
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Dr. Karl Gebhardt	McDonald Observatory	[A377]
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Dr. Edward Ginsberg	University of Massachusetts, Boston	[A95]
Dr. Larry Girolamo	University of Illinois at Urbana-Champaign	[A8]
Dr. Anatoly Gitelson	University of Nebraska-Lincoln	[A8]
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Dr. Marcelo Gleiser	Dartmouth College	[A55]
Dr. Jason Glenn	University of Colorado, Boulder	[A9]
Mr. Gary Glick	Tufts University	[A47, A269, A461]
Mr. Walter Glogowski	Ridgewood High School	[A64, A403]
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Mr. Peter Gluck	NASA Jet Propulsion Laboratory	[A417]
Dr. Nickolay Gnedin	U.S. Air Force Academy	[A509]
Mr. John Godfrey	Space Telescope Science Institute	[A346]
Dr. Johann Gogarten	Marine Biological Laboratory	[A3]
Dr. Prasad Gogineni	University of Kansas	[A8]
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Mr. Brian Gootee	Arizona State University	[A89, A302]
Mr. Zareh Gorjian	NASA Jet Propulsion Laboratory	[A415]
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Dr. Paul Green	Harvard-Smithsonian Center for Astrophysics	[A170]
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Dr. Brian Greene	Columbia University	[A9]
Dr. Jackie Greene	NASA Jet Propulsion Laboratory	[A10]
Mr. Michael Greene	NASA Jet Propulsion Laboratory	[A365, A513]
Dr. George Greenstein	Amherst College	[A514]
Mr. Sean Greenwalt	Sonoma State University	[A64, A81, A84, A129, A241, A272, A446]
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Dr. Dirk Grupe	Pennsylvania State University	[A46]
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Ms. Kathryn Guimond	College of Charleston	[A53, A59, A236]
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Dr. David Haase	North Carolina State University	[A73]
Dr. Nick Haddad	TERC	[A54]
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Dr. Justin Haggerty	Los Alamos National Laboratory	[A5]
Dr. Zoltan Haiman	Columbia University	[A9]
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Mr. Garrison Hall	Pauline Glenn Springs Elementary School	[A51]
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Dr. Brad Hansen	University of California, Los Angeles	[A249]
Dr. Ken "KC" Hansen	University of Michigan	[A5]
Ms. Dee Hanson	Alaska Airmen's Association	[A427]
Dr. Lawrence Harding	University of Maryland	[A8]
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Mr. James Harold	Space Science Institute	[A109, A335]
Mr. Al Harper	NASA Space Science Center at DePaul University	[A400, A452]
Dr. Doyal Harper	University of Chicago	[A508]
Dr. Joseph Harrington	Cornell University	[A36]
Ms. Tammy Harrington	NASA Kennedy Space Center	[A415]
Dr. Walt Harris	University of Wisconsin-Madison	[A56, A98, A505]
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Dr. Roger Hathaway	NASA Langley Research Center	[A222]
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Dr. Sue Heatherley	Green Bank National Radio Astronomy Observatory	[A43]
Mr. Sebastian Heinz	Massachusetts Institute of Technology	[A131]
Mr. Anthony Heinzman	Apple Valley Middle School	[A47]
Dr. David Helfand	Columbia University	[A1]
Mr. Donald Heller	NASA Jet Propulsion Laboratory	[A328]
Dr. Mary Kay Hemenway	University of Texas at Austin	[A60, A127, A377]
Dr. Russell Hemley	Carnegie Institution of Washington	[A3]
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Ms. Rosa Hemphill	Oregon Episcopal School	[A245]
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Dr. Geoffrey Henebry	University of Nebraska-Lincoln	[A8]
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Mr. Michael Henry	Lockheed Martin Corporation	[A59, A89]
Dr. Gary Henson	East Tennessee State University	[A160]
Mr. Ken Herkenhoff	U.S. Geological Survey	[A478]
Dr. Randy Herrera	NASA Jet Propulsion Laboratory	[A267, A298]
Dr. Fred Herrero	NASA Goddard Space Flight Center	[A6]
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Ms. Kim Herrmann	Pennsylvania State University	[A46]
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Ms. Inge Heyer	Space Telescope Science Institute	[A472]
Dr. Mark Heyer	University of Massachusetts	[A158]
Ms. Meredith Higbie	Lunar and Planetary Institute	[A472]
Dr. Jack Higginbotham	Oregon State University	[A98]
Dr. Chuck Higgins	Middle Tennessee State University	[A373]
Mr. Dolan Highsmith	NASA Jet Propulsion Laboratory	[A417]
Dr. Roger Hildebrand	University of Chicago	[A508]
Ms. Gay Hill	NASA Jet Propulsion Laboratory	[A470]
Mr. Logan Hill	Sonoma State University	[A261]
Mr. George Hilton	NASA Goddard Space Flight Center	[A6]
Dr. Dave Hipkins	Stanford University	[A271, A499]
Mr. Naruki Hirai	University of Maryland	[A398]
Dr. Katherine Hirschboeck	University of Arizona	[A8]
Dr. William Hiscock	Montana State University	[A27]
Dr. Susan Hoban	NASA Goddard Space Flight Center	[A6]
Dr. Jane Hoberman	University of California, Berkeley	[A121]
Dr. Eric Hochberg	University of Hawaii at Manoa	[A4]
Ms. Vivian Hoette	Yerkes Observatory, University of Chicago	[A38, A215, A236, A400]
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Dr. Mark Hofstadter	NASA Jet Propulsion Laboratory	[A62, A63, A279]
Ms. Karen Hogan	NASA Jet Propulsion Laboratory	[A298]
Mr. Tim Hogle	NASA Jet Propulsion Laboratory	[A445]
Mr. Patrick Hogue	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. David Holland	New York University	[A8]
Dr. Matthew Holmann	Harvard-Smithsonian Center for Astrophysics	[A170]
Ms. Bree Holmboe	Stratospheric Observatory For Infrared Astronomy (SOFIA)	[A264]
Ms. Ellen Holmes	Bangor School Department	[A64, A95]
Ms. Margaret Holzer	Chandra X-ray Center	[A47, A129]
Dr. Eric Hooper	Harvard-Smithsonian Center for Astrophysics	[A462]
Ms. Rebecca Horne	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Ann Hornschemeir	Johns Hopkins University	[A266, A451]
Dr. George Hospodarsky	University of Iowa	[A267]
Mr. David Hostetter	Lafayette Natural History Museum and Planetarium	[A356]
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Dr. Robert Houze	University of Washington	[A8]
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Dr. David Howe	Gonzaga State University	[A100]
Ms. Sophia Hu	McKinley High School	[A98]
Ms. Meg Hufford	Arizona State University	[A89, A145, A417]
Mr. Scott Hulme	NASA Jet Propulsion Laboratory	[A299, A381, A417]
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Ms. Tara Hunter	NASA Ames Research Center	[A264]
Dr. Terry Huntsberger	NASA Jet Propulsion Laboratory	[A417]
Dr. Stuart Hurlbert	University of California, Davis	[A8]
Dr. Robert Hurt	California Institute of Technology (Caltech)	[A438]
Dr. Jose Miguel Hurtado	University of Texas at El Paso	[A4]
Mr. Vincent Hurtig	Chief Dull Knife College	[A245]
Dr. Melinda Hutson	Portland State University	[A368]
Mr. Chialan Hwang	NASA Jet Propulsion Laboratory	[A417]
Ms. Pauline Hwang	NASA Jet Propulsion Laboratory	[A415]
Dr. Rob Hynes	McDonald Observatory	[A377]
Mr. Peter Illsley	NASA Jet Propulsion Laboratory	[A89]
Mr. Stefan Immler	NASA Goddard Space Flight Center	[A451]
Dr. Laura Iraci	NASA Ames Research Center	[A4]
Dr. Anton Ivanov	NASA Jet Propulsion Laboratory	[A478]
Mr. Randal Jackson	NASA Jet Propulsion Laboratory	[A366, A481, A482]
Mr. Robert Jackson	NASA Ames Research Center	[A510]
Dr. Daniel Jacob	Harvard University	[A8]
Dr. Jennifer Jacobs	University of New Hampshire	[A8]
Mr. Moriba Jah	NASA Jet Propulsion Laboratory	[A415, A417]
Mr. Ben Jai	NASA Jet Propulsion Laboratory	[A478]
Dr. Bruce Jakosky	University of Colorado	Boulder [A3]
Dr. Jon Jenkins	NASA Ames Research Center	[A510]
Mr. Doug Jerolmack	Massachusetts Institute of Technology	[A478]
Dr. Kenneth Jezek	Ohio State University	[A8]
Ms. Patricia Jibben	Montana State University	[A324]
Dr. Jose-Luis Jimenez	University of Colorado, Boulder	[A8]
Dr. Shardha Jogee	McDonald Observatory	[A377]
Ms. Christine Johnson	NASA Jet Propulsion Laboratory	[A145, A299, A415, A417, A477, A478]
Ms. Jackie Johnson	NASA Jet Propulsion Laboratory	[A299, A417]
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Dr. Robert Johnson	University of Virginia	[A9, A15]
Dr. Roberta Johnson	University Corporation for Atmospheric Research	[A260]
Dr. Torrence Johnson	NASA Jet Propulsion Laboratory	[A267]
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Dr. Randy Jokipii	University of Arizona	[A450]
Mr. Byron Jones	NASA Jet Propulsion Laboratory	[A478]
Dr. Christine Jones	Harvard-Smithsonian Center for Astrophysics	[A1, A176, A339, A356]
Ms. Jane Jones	NASA Jet Propulsion Laboratory	[A392]
Ms. Rhonda Jones	NASA Jet Propulsion Laboratory	[A13]
Dr. Lawrence Josbeno	Corning Community College	[A328]
Dr. Bob Joseph	Institute for Astronomy	[A427]
Dr. Jasmeet Judge	University of Florida	[A4, A8]
Dr. Christopher Justice	University of Maryland	[A8]
Ms. Mary Kadooaka	Institute for Astronomy	[A98, A104, A245, A427]
Mr. James Kaidy, Sr.	Johns Hopkins University Applied Physics Laboratory	[A423]
Dr. Ralf Kaiser	Institute for Astronomy	[A98]
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Dr. Rick Kang	Pine Mountain Observatory	[A245, A312, A426, A427]
Dr. Charles Kankelborg	Montana State University	[A9]
Dr. Erich Karkoschka	University of Arizona	[A505]
Dr. Vinay Kashyap	Harvard-Smithsonian Center for Astrophysics	[A95]
Dr. Eric Kasischke	University of Maryland	[A8]
Dr. James Kasting	Pennsylvania State University	[A3, A307]
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Ms. Claudine Kavanagh	Tufts University	[A218]
Dr. Suzanne Kay	Cornell University	[A8]
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Dr. Ralph Keeling	University of California, San Diego	[A8]
Dr. Luke Keller	Ithaca College	[A36]
Dr. Michael Kelley	Cornell University	[A20]
Dr. Nina Kelly	University of California, Berkeley	[A4]
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Ms. Elizabeth Kessler	University of Chicago	[A437]
Dr. Jackie Kessler-Silacci	McDonald Observatory	[A377]
Dr. Laszlo Keszthelyi	U.S. Geological Survey	[A89, A298]
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Ms. Kathy Kitts	Washington University	[A159]
Dr. Andrew Klein	Texas A&M University	[A4]
Dr. Michael Klein	NASA Jet Propulsion Laboratory	[A63]
Dr. Craig Kletzing	University of Iowa	[A9]
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Ms. Amy Knudson	Arizona State University	[A89, A145, A302, A303]
Dr. Henry Kobulnicky	University of Wyoming	[A312, A332]
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Ms. Veronique Koken	NASA Ames Research Center	[A264]
Dr. John Kolena	North Carolina School of Science and Mathematics	[A47, A269]
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Mr. Toshi Komatsu	University of California, Berkeley	[A510]
Mr. Yoji Kondo	NASA Goddard Space Flight Center	[A510]
Mr. Drew Koning	American Museum of Natural History	[A445]
Dr. Samuel Kounaves	Tufts University	[A158, A417, A515]
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Mr. Stan Kozuch	Johns Hopkins University Applied Physics Laboratory	[A97, A309]
Dr. Kathleen Kraemer	Air Force Research Laboratory	[A95]
Dr. Ralph Kraft	Harvard-Smithsonian Center for Astrophysics	[A170]
Dr. Sonia Kreidenweis	Colorado State University	[A8]
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Dr. Hans Krimm	NASA Goddard Space Flight Center	[A451]
Dr. Anita Krishnamurthi	NASA Headquarters	[A472]
Dr. Gerhard Kruizinga	NASA Jet Propulsion Laboratory	[A417]
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Dr. Harald Kucharek	University of New Hampshire	[A263]
Ms. Rita Kujawa	Wingate Elementary School	[A47]
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Dr. Christian Kummerow	Colorado State University	[A8]
Dr. Phaedon Kyriakidis	University of California, Santa Barbara	[A8]
Dr. John Lacy	McDonald Observatory	[A377]
Dr. Irene Ladd	NASA Langley Research Center	[A65]
Mr. Paul Lafferty	Johns Hopkins University Applied Physics Laboratory	[A317]
Mr. Geoffrey Lake	NASA Jet Propulsion Laboratory	[A298, A299, A415]
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Dr. Ravindra Lal	Alabama A&M University	[A17]
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Mr. Erich Landstorm	Boynton Beach Community High School	[A81, A84]
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Ms. Catherine Lanier	Oregon State University	[A98, A104, A312]
Mr. Tom LaPorte	Aerospace Data International	[A236]
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Dr. Michelle Larson	Pennsylvania State University	[A46, A81, A356, A518]
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Mr. Travis Laurance	University of Wyoming	[A312]
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Ms. Zoe Learner	Cornell University	[A36, A501]
Dr. James Leary	Johns Hopkins University Applied Physics Laboratory	[A309]
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Dr. Adrian Lee	University of California, Berkeley	[A9]
Ms. Shannon Lee	Chabot Community College	[A238, A315, A371]
Dr. Steve Lee	University of Colorado, Boulder	[A189]
Dr. Wayne Lee	NASA Jet Propulsion Laboratory	[A267, A501]
Dr. Lerethodi Leeuw	University of Chicago	[A508]
Dr. Michael Lefsky	Colorado State University	[A8]
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Ms. Lisa Leija	University of Houston-Downtown	[A387]
Dr. Kimberly-Dawn Leka	Northwest Research Associates	[A240]
Dr. Mark Lemmon	Texas A&M University	[A478, A505]
Dr. Geoff Lenters	Grand Valley State University	[A356]
Dr. Steven Lentz	Woods Hole Oceanographic Institute	[A8]
Ms. Yvette Lerma	Nogales High School	[A417]
Dr. Arthur Lerner-Lam	Columbia University	[A8]
Dr. Laurie Leshin	Arizona State University	[A3, A398]
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Mr. Mike Lilly	NASA Goddard Space Flight Center	[A371]
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Mr. Ali Safaeinili	NASA Jet Propulsion Laboratory	[A298, A417, A478]
Dr. Dork Sahagian	University of New Hampshire	[A8]
Dr. Phil Sakimoto	University of Notre Dame	[A472]
Dr. Susan Sakimoto	NASA Goddard Space Flight Center	[A417, A508]
Dr. Carlos Salgado	Norfolk State University	[A27]
Dr. Ron Samec	Bob Jones University	[A236]
Mr. Doug Sanders	NASA Jet Propulsion Laboratory	[A381]
Dr. Eric Sanderson	Wildlife Conservation Society	[A4]
Dr. Brad Sandor	Space Science Institute	[A189]
Dr. David Sandwell	Scripps Institution of Oceanography	[A8]
Mr. Dale Sanford	University of Chicago	[A215]
Dr. Jorge Sarmiento	Princeton University	[A8]
Dr. Dimitar Sasselov	Harvard-Smithsonian Center for Astrophysics	[A99]
Dr. Steve Saunders	NASA Jet Propulsion Laboratory	[A89]
Ms. Maureen Savage	Universities Space Research Association	[A264]
Dr. Dale Sawyer	Rice University	[A341]
Dr. Frank Scalzo	NASA Goddard Institute for Space Studies	[A23, A26]
Mr. Kyle Scanlon	Arizona State University	[A419]
Mr. Anthony Scarpati	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Kristie Scheel	University of Wyoming	[A104]
Mr. Lawrence Scherr	NASA Jet Propulsion Laboratory	[A417]
Ms. Deborah Scherrer	Stanford University	[A40, A189, A238, A315, A371]
Dr. Philip Scherrer	Stanford University	[A189, A238, A315]
Dr. David Schiminovich	Columbia University	[A9]

Mr. Zach Schimke	Arizona State University	[A89]
Dr. Geoffrey Schladow	University of California, Davis	[A8]
Dr. Donald Schneider	Pennsylvania State University	[A46, A81]
Dr. Tapio Schneider	California Institute of Technology (Caltech)	[A8]
Dr. Norbert Schorghofer	Hawaii Institute of Geophysics and Planetology	[A98, A427]
Dr. Karel Schryver	Lockheed Martin Solar and Astrophysics Laboratory	[A443]
Ms. Cindy Schultz	Lockheed Martin Space Systems	[A298]
Dr. Greg Schultz	University of California, Berkeley	[A103, A115, A116, A117, A118, A319, A383, A439, A440, A462]
Dr. Peter Schultz	Brown University	[A9, A51]
Dr. Edward Schuur	University of Florida	[A4]
Dr. Marc Schwartz	McGill University	[A170]
Mr. Eric Schwartzbaum	NASA Jet Propulsion Laboratory	[A417]
Ms. Maria Schwarz	University of Puerto Rico at Mayaguez	[A88, A101, A144]
Dr. Andrea Schweitzer	Little Thompson Observatory	[A41]
Dr. Jennifer Scott	Space Telescope Science Institute	[A266, A469]
Mr. Lauren Scott	Washington University	[A450]
Dr. Richard Seager	Columbia University	[A8]
Dr. Sara Seager	Carnegie Institution of Washington	[A3]
Mr. Casey Sean	Universities Space Research Association	[A215]
Mr. Daniel Sedlacko	NASA Jet Propulsion Laboratory	[A381]
Dr. Paul Segall	Stanford University	[A8]
Mr. David Seidel	NASA Jet Propulsion Laboratory	[A299]
Mr. Dave Senske	NASA Jet Propulsion Laboratory	[A415, A417]
Mr. Robert Sepulveda	Science Applications International Corporation (SAIC)	[A54]
Mr. Roberto Sepulveda	NASA Langley Research Center	[A318]
Mr. Fred Serricchio	NASA Jet Propulsion Laboratory	[A298]
Dr. Frederick Seward	Harvard-Smithsonian Center for Astrophysics	[A170]
Mr. Andy Shaner	University of Arizona	[A417]
Ms. Debbie Shanklin	Montana State University	[A312]
Dr. Paul Shapiro	McDonald Observatory	[A377]
Dr. Stuart Shapiro	University of Illinois at Urbana-Champaign	[A9]
Dr. Mark Shappirio	Los Alamos National Laboratory	[A6]
Ms. Colleen Sharkey	NASA Jet Propulsion Laboratory	[A381, A415, A417, A478]
Dr. Thomas Sharp	Arizona State University	[A9]
Mr. Chad Sharpe	Boys & Girls Clubs of Wyoming	[A312]
Mr. Robert Sharrow	NASA Jet Propulsion Laboratory	[A417]
Mr. Jim Shell	NASA Jet Propulsion Laboratory	[A52]
Dr. Ohad Shemmer	Pennsylvania State University	[A46]
Dr. J. Marshall Shepherd	NASA Goddard Space Flight Center	[A4]
Dr. Gregory Shields	McDonald Observatory	[A377]
Dr. Harry Shipman	University of Delaware	[A127]
Dr. Stephanie Shipp	Rice University	[A53, A59, A514, A516]
Dr. Evgenya Shkolnik	Institute for Astronomy	[A98]
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Mr. Robert Shotwell	NASA Jet Propulsion Laboratory	[A417]
Dr. Adam Showman	University of Arizona	[A9]
Dr. Herman Shugart	University of Virginia	[A8]
Ms. Susan Shugerman	Oregon Health Science University	[A104]
Ms. Amy Shutkin	University of California, Berkeley	[A103]
Dr. David A. Siegel	University of California, Santa Barbara	[A8]
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Dr. Kristine Sigsbee	NASA Goddard Space Flight Center	[A240]
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Ms. Sarah Silva	Sonoma State University	[A64, A81, A84, A105, A129, A241, A261, A270, A272, A320, A403, A441, A446, A447, A518]
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Mr. Kyle Simek	Arizona State University	[A417]
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Ms. Elizabeth Simmons	Holy Spirit Regional School	[A500]
Dr. Amy Simon-Miller	NASA Goddard Space Flight Center	[A392]
Ms. Aurore Simonnet	Sonoma State University	[A403]
Dr. Mark Simons	California Institute of Technology (Caltech)	[A4]
Ms. Cammy Skiba	Arizona State University	[A89]

Dr. Ruth Skoug	Los Alamos National Laboratory	[A142]
Dr. Patrick Slane	Harvard-Smithsonian Center for Astrophysics	[A170, A356, A461]
Dr. Timothy Slater	University of Arizona	[A13, A100, A462]
Dr. Alan Smale	NASA Goddard Space Flight Center	[A42]
Ms. Karen Smale	NASA Goddard Space Flight Center	[A42, A471]
Ms. Anne Smith	Lockheed Martin Corporation	[A89]
Dr. Charles Smith	University of New Hampshire	[A327, A450]
Dr. Denise Smith	Space Telescope Science Institute	[A100, A462, A470, A472, A514, A516, A518]
Mr. Erick Smith	University of Wyoming	[A312]
Ms. Hilary Smith	Stratospheric Observatory For Infrared Astronomy (SOFIA)	[A264]
Ms. Linda Smith	Paulsboro Public Schools	[A61, A81]
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Dr. Peter H. Smith	University of Arizona	[A417]
Dr. Randall Smith	Harvard-Smithsonian Center for Astrophysics	[A170]
Mr. Steve Smith	NASA Jet Propulsion Laboratory	[A417]
Dr. Toby Smith	University of Washington	[A425, A427]
Mr. Vern Smith	NASA Goddard Space Flight Center	[A377]
Dr. Willard Smith	Tennessee State University	[A27]
Mr. Bill Smythe	NASA Jet Propulsion Laboratory	[A398]
Dr. Cary Sneider	Museum of Science	[A218]
Mr. Nathan Snider	NASA Jet Propulsion Laboratory	[A417]
Dr. Dave Soderblom	Space Telescope Science Institute	[A437]
Mr. Jason Soderblom	Cornell University	[A501]
Dr. Mitchell Sogin	Marine Biological Laboratory	[A3]
Ms. Jascha Sohl-Dickstein	Cornell University	[A478]
Ms. Anita Sohus	NASA Jet Propulsion Laboratory	[A384, A464]
Ms. Nadine Solomon	Hardy Public School	[A176]
Dr. Didier Sornette	University of California, Los Angeles	[A8]
Dr. Jane Southworth	University of Florida	[A8]
Dr. Tim Spahr	Harvard-Smithsonian Center for Astrophysics	[A170]
Dr. James Spann	NASA Marshall Space Flight Center	[A247]
Mr. Robert Sparks	Prairie School, The	[A47, A81]
Ms. Karen Spaulding	Cambridge Public School District	[A99]
Dr. Gordon Spear	Sonoma State University	[A403]
Dr. John Spear	University of Colorado, Boulder	[A335]
Dr. Robert Spear	University of California, Berkeley	[A8]
Mr. Tony Spear	NASA Jet Propulsion Laboratory	[A267]
Ms. Karen Spence	Museum of Science	[A96, A218, A219, A436, A507, A515]
Mr. Dave Spencer	NASA Jet Propulsion Laboratory	[A267]
Dr. John Spencer	Southwest Research Institute	[A41]
Dr. Martin Spergel	York College	[A27]
Ms. Linda Spilker	NASA Jet Propulsion Laboratory	[A10]
Dr. Thomas Spilker	NASA Jet Propulsion Laboratory	[A10]
Ms. Suzanne Spitz	NASA Jet Propulsion Laboratory	[A417]
Mr. Curt Spivey	Avampato Discovery Museum	[A356]
Dr. Paul Spudis	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Steve Squyres	Cornell University	[A381, A417, A478]
Dr. Lawrence Sromovsky	University of Wisconsin-Madison	[A56, A137, A138, A505]
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Mr. Jonathan Stabb	NASA Jet Propulsion Laboratory	[A415]
Dr. Gordon Stacey	Cornell University	[A9]
Mr. Leondest Staley	Arizona State University	[A419]
Mr. Shaun Standley	NASA Jet Propulsion Laboratory	[A279, A381, A392]
Dr. Eileen Stansbery	NASA Johnson Space Center	[A59, A108]
Dr. Michele Stark	University of Wyoming	[A245]
Mr. Ken Starr	NASA Jet Propulsion Laboratory	[A417]
Dr. Sumner Starrfield	Arizona State University	[A1]
Mr. Joseph Statman	NASA Jet Propulsion Laboratory	[A399]
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Mr. Marc Steiner	WYPR Radio, 88.1 FM/Baltimore	[A472]
Mr. Adam Steltzner	NASA Jet Propulsion Laboratory	[A301, A415, A501]
Mr. Paul Stengel	Chandra X-ray Center	[A47, A269]
Dr. S. Alan Stern	Southwest Research Institute	[A309, A422]
Dr. Bjorn Stevens	University of California, Los Angeles	[A4]

Dr. Bjorn Stevens	University of California, Los Angeles	[A8]
Dr. Sarah Stewart-Mukhopadhyay	Harvard University	[A9]
Dr. Massimo Stiavelli	Space Telescope Science Institute	[A365, A437]
Dr. Christopher Still	University of California, Santa Barbara	[A4, A8]
Ms. Karen Stocco	Pasadena Independent School District	[A59, A89, A303]
Ms. Stephanie Stockman	NASA Goddard Space Flight Center	[A27, A59, A65, A97, A309, A462, A470]
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Ms. Margaret Strong	Johns Hopkins University	[A309]
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Dr. Jim Stryder	Western Colorado Museum	[A240]
Dr. Mark Subarro	Adler Planetarium and Astronomy Museum	[A375]
Dr. Steven Suess	NASA Marshall Space Flight Center	[A327]
Dr. Rob Sullivan	Cornell University	[A417]
Dr. Frank Summers	Space Telescope Science Institute	[A90, A200, A348, A437, A472]
Dr. Carolyn Sumners	Houston Museum of Natural Science	[A79, A341, A355, A387, A394, A413, A462, A475]
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Dr. Jessica Sunshine	Science Applications International Corporation (SAIC)	[A398]
Ms. Taunya Sweet	U.S. Space and Rocket Center	[A309, A422]
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Dr. Jack Szostack	Harvard University	[A3]
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Dr. Elsayed Talaat	Johns Hopkins University Applied Physics Laboratory	[A309]
Mr. Kevin Talley	NASA Jet Propulsion Laboratory	[A303, A415]
Ms. Cindy Tamashiro	Kapunahala Elementary School	[A245]
Dr. Leslie Tamppari	NASA Jet Propulsion Laboratory	[A415]
Dr. Arjun Tan	Alabama A&M University	[A17]
Ms. Florence Tan	NASA Goddard Space Flight Center	[A6, A86, A433]
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Dr. Simone Tanelli	NASA Jet Propulsion Laboratory	[A4]
Dr. Byron Tapley	University of Texas at Austin.	[A8]
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Dr. Maritza Tavaréz	University of Washington	[A312]
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Dr. Jeff Taylor	University of Hawaii at Manoa	[A9, A98]
Ms. Julie Taylor	Desert Trails School	[A200, A392]
Dr. William Taylor	NASA Goddard Space Flight Center	[A373]
Dr. Ed Tedesco	University of New Hampshire	[A450]
Mr. Farinaz Tehrani	NASA Jet Propulsion Laboratory	[A417]
Dr. Charles Telesco	University of Florida	[A9]
Mr. Avo Terzian	NASA Jet Propulsion Laboratory	[A417]
Dr. Andreas Teske	Marine Biological Laboratory	[A3]
Mr. Hao Thai	Stanford University	[A315]
Dr. Michelle Thaller	California Institute of Technology (Caltech)	[A100, A267, A335 A438, A513]
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Mr. Pete Theisinger	NASA Jet Propulsion Laboratory	[A89, A415]
Dr. James Thieman	NASA Goddard Space Flight Center	[A253, A373, A383, A439, A440, A497]
Dr. Adam Thodey	Ball Aerospace Technologies Corporation	[A510]
Mr. Benjamin Thoma	NASA Jet Propulsion Laboratory	[A89, A384]
Ms. Kathie Thomas-Keprta	NASA Johnson Space Center	[A298]
Dr. Michael Thomashow	Michigan State University.	[A3]
Mr. Arthur Thompson	NASA Jet Propulsion Laboratory	[A478]
Dr. Barbara Thompson	NASA Goddard Space Flight Center	[A267]
Dr. David Thompson	NASA Goddard Space Flight Center	[A64]
Mr. Shane Thompson	Arizona State University	[A478]

Dr. Tommy Thompson	NASA Jet Propulsion Laboratory	[A417]
Dr. Joel Thornton	University of Washington	[A4, A8]
Mr. Tom Thorpe	NASA Jet Propulsion Laboratory	[A477]
Dr. Trinh Thuan	University of Virginia	[A509]
Dr. James Tiedje	Michigan State University	[A3]
Ms. Jenny Tieu	NASA Jet Propulsion Laboratory	[A470, A481]
Dr. Peter Timbie	University of Wisconsin-Madison	[A119]
Dr. Giovanna Tinetti	NASA Jet Propulsion Laboratory	[A3]
Ms. Violet Tissot	NASA Jet Propulsion Laboratory	[A298]
Ms. Jody Tobin	NASA Kennedy Space Center	[A415]
Ms. Kay Tobola	Lockheed Martin Corporation	[A53, A54, A59, A89, A236, A298, A299, A303, A379, A387, A417, A470, A472]
Dr. Margaret Tolbert	University of Colorado, Boulder	[A8, A9]
Ms. Holly Tollefson	Chandra X-ray Center	[A47]
Mr. Bob Tomkiewicz	Johns Hopkins University Applied Physics Laboratory	[A309, A317]
Dr. Juri Toomre	University of Colorado, Boulder	[A9]
Dr. Brian Toon	University of Colorado, Boulder	[A8]
Dr. Owen Toon	University of Colorado, Boulder	[A3, A9]
Dr. Guillermo Torres	Harvard-Smithsonian Center for Astrophysics	[A99]
Mr. Nicholas Tosca	State University of New York (SUNY), Stony Brook	[A478]
Ms. Julie Townsend	NASA Jet Propulsion Laboratory	[A415, A417, A470, A501]
Dr. Laurence Trafton	University of Texas at Austin	[A377, A493]
Ms. Lynn Tran	NASA Jet Propulsion Laboratory	[A417]
Dr. Wesley Traub	Harvard-Smithsonian Center for Astrophysics	[A99, A307]
Dr. Suzanne Traub-Metlay	Fiske Planetarium	[A41]
Dr. Ashitey Trebi-Ollennu	NASA Jet Propulsion Laboratory	[A299]
Mr. George Tremberger	City University of New York (CUNY) Queensborough Community College	[A27] [A27]
Dr. Shana Tribiano	CUNY Borough of Manhattan Community College	[A27]
Mr. John Troll	Johns Hopkins University Applied Physics Laboratory	[A395, A423]
Ms. Jennifer Trosper	NASA Jet Propulsion Laboratory	[A501]
Dr. Susan Trumbore	University of California, Irvine	[A8]
Dr. Gregory Tucker	Brown University	[A119]
Ms. Ramona Tung	NASA Jet Propulsion Laboratory	[A415]
Dr. Eddie Tunstel	NASA Jet Propulsion Laboratory	[A299]
Dr. Bille Turner II	Clark University	[A8]
Ms. Jennifer Turner-Valle	Ball Aerospace Technologies Corporation	[A398]
Dr. Dan Tyson	University of Wyoming	[A312]
Dr. Neil Tyson	American Museum of Natural History	[A25, A27]
Ms. Joan Underwood	Lockheed Martin Space Systems	[A415]
Mr. Mark Underwood	NASA Jet Propulsion Laboratory	[A417]
Mr. Bryce Unruh	Ball Aerospace Technologies Corporation	[A510]
Dr. Stephen Unwin	NASA Jet Propulsion Laboratory	[A513]
Dr. Dean Urban	Duke University	[A8]
Mr. Kenneth Urban	Southfield High School	[A400]
Dr. Mary Urquhart	NASA Ames Research Center	[A100]
Dr. Mete Uz	University of Maryland	[A4]
Ms. Paige Valderrama	Arizona State University	[A89, A145, A298, A302, A303, A379, A417, A418, A501]
Dr. David Valentine	University of California, Santa Barbara	[A9]
Mr. Mark Van Hecke	Science Olympiad	[A47]
Dr. Edward Van Vleet	University of South Florida	[A8]
Dr. Raymond Vandiver	Oregon Museum of Science and Industry	[A342]
Dr. Harri Vanhala	Challenger Center for Space Science Education	[A54]
Dr. Gerardo Vazquez	Space Telescope Science Institute	[A472]
Dr. Lee Vierling	University of Idaho	[A54]
Mr. Ray Villard	Space Telescope Science Institute	[A437, A472]
Ms. Michelle Viott	NASA Jet Propulsion Laboratory	[A89, A299, A301, A384, A415, A417, A470, A478]
Dr. Theodore von Hippel	University of Texas at Austin	[A127, A377]
Dr. Janice Voss	NASA Ames Research Center	[A510]
Dr. Jan Vrtilek	Harvard University	[A461]
Dr. Saku Vrtilek	Harvard-Smithsonian Center for Astrophysics	[A269]
Dr. Henry Wadzinski	Harvard-Smithsonian Center for Astrophysics	[A170]
Dr. Alan Waggoner	Carnegie Mellon University	[A375]
Mr. Michael Wagner	Carnegie Mellon University	[A375]

Ms. Gretchen Walker	University of Maryland	[A104]
Mr. Randy Walker	Lockheed Martin Space Systems	[A415]
Dr. Stuart Walker	Ball Aerospace Technologies Corporation	[A510]
Dr. William Waller	Museum of Science	[A11, A158, A483]
Dr. William Waller	Tufts University	[A20, A95, A158, A462, A507, A514]
Dr. Stephen J. Walsh	University of North Carolina-Chapel Hill	[A8]
Dr. Donald Walter	South Carolina State University	[A20, A27, A31]
Mr. Eric Wang	Universities Space Research Association	[A264, A448]
Dr. Guiling Wang	University of Connecticut	[A8]
Dr. Bruce Ward	Harvard-Smithsonian Center for Astrophysics	[A170]
Dr. Peter Ward	University of Washington	[A3]
Ms. Kelly Wardlaw	Oklahoma State University	[A97, A309]
Dr. Bradley Wargelin	Harvard-Smithsonian Center for Astrophysics	[A269]
Ms. Elizabeth Warner	University of Maryland	[A51, A397, A398]
Ms. Karla Warner	Goldstone Deep Space Communications Complex	[A281, A282, A405 A406]
Dr. Ira Wasserman	Cornell University	[A9]
Dr. Stephen Wasserzug	NASA Goddard Space Flight Center	[A6]
Dr. Mike Watkins	NASA Jet Propulsion Laboratory	[A417, A477]
Mr. Mitchell Watkins	NASA Goddard Space Flight Center	[A19, A101, A144, A404, A433, A434, A435]
Dr. Michael Watson	Fisk University	[A508]
Mr. Keith Watt	Arizona State University	[A54, A89, A145, A301, A418]
Dr. Tamra Wear	Challenger Learning Center of Alaska	[A427]
Dr. Christopher Weaver	Rutgers University	[A8]
Ms. Donna Weaver	Space Telescope Science Institute	[A472]
Mr. Gregory Weaver	Johns Hopkins University Applied Physics Laboratory	[A309]
Dr. Harold Weaver	Johns Hopkins University Applied Physics Laboratory	[A97, A309]
Mr. Andy Webb	Johns Hopkins University Applied Physics Laboratory	[A309, A317]
Dr. Mark Weber	Harvard-Smithsonian Center for Astrophysics	[A325]
Mr. Guy Webster	NASA Jet Propulsion Laboratory	[A381]
Ms. Julie Webster	NASA Jet Propulsion Laboratory	[A245, A267, A392]
Mr. Thomas Weeks	NASA Jet Propulsion Laboratory	[A328]
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Mr. Scott Weidner	Southwest Research Institute	[A309, A423]
Dr. John Weishampel	University of Central Florida	[A8]
Mr. Adam Weiss	Museum of Science	[A339]
Dr. Jeffrey Weissel	Columbia University	[A8]
Mr. David Welch	Lockheed Martin Space Systems	[A415]
Mr. Rick Welch	NASA Jet Propulsion Laboratory	[A298, A417, A478]
Dr. Ronald Welch	University of Alabama at Huntsville	[A8]
Dr. Lianxing Wen	State University of New York (SUNY), Stony Brook	[A4]
Dr. Jennifer Wernergreen	Marine Biological Laboratory	[A3]
Ms. Alice Wessen	NASA Jet Propulsion Laboratory	[A415]
Dr. Randii Wessen	NASA Jet Propulsion Laboratory	[A267, A415]
Dr. Joannes Westerink	Notre Dame University	[A508]
Mr. Andrew Westphal	University of California, Berkeley	[A439]
Dr. David Wettergreen	Carnegie Mellon University	[A375]
Ms. Aimee Whalen	NASA Jet Propulsion Laboratory	[A89, A327, A381 A415]
Dr. Craig Wheeler	University of Texas at Austin	[A377, A494]
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Ms. Lelie White	NASA Jet Propulsion Laboratory	[A417]
Dr. Michael White	Utah State University	[A4]
Dr. Timothy White	Pennsylvania State University	[A16]
Dr. Charles Whitney	Harvard-Smithsonian Center for Astrophysics	[A170]
Dr. William Whitney	NASA Jet Propulsion Laboratory	[A470]
Mr. Jerry Wiant	McDonald Observatory	[A377]
Dr. Barbara Williams	University of Delaware	[A508]
Ms. Deborah Williams	Ballard Junior High School	[A62]
Dr. Jonathan Williams	University of Hawaii at Manoa	[A9]
Mr. Paul Williams	The Governor's Institutes of Vermont	[A125]
Dr. Rebecca Williams	Smithsonian Institution, Center for Earth and Planetary Science	[A5]
Dr. Steven Williams	Smithsonian National Air and Space Museum (NASM)	[A417]
Dr. Beverley Wills	McDonald Observatory	[A377]
Dr. Gregory Wilson	NASA Jet Propulsion Laboratory	[A10]
Mr. Hugh Wilson	Space Telescope Science Institute	[A472]
Mr. Ken Wilson	Science Museum of Virginia	[A509]

Dr. Terry Wilson	Ohio State University	[A8]
Mr. James Wincentsen	NASA Jet Propulsion Laboratory	[A417]
Mr. Scott Winegarden	Stanford University	[A238]
Dr. Don Winget	University of Texas at Austin	[A112]
Dr. Robert Winglee	University of Washington	[A425]
Mr. Linder Winter	Tufts University	[A47, A269]
Mr. John Wirth	NASA Jet Propulsion Laboratory	[A400]
Dr. Paul Withers	Boston University	[A158]
Ms. Mona Witkowski	NASA Jet Propulsion Laboratory	[A267]
Dr. Steven Wofsy	Harvard University	[A8]
Dr. Juergen Wolf	NASA Ames Research Center	[A264]
Dr. Michael Wolff	Space Science Institute	[A189]
Ms. Shirley Wolff	NASA Jet Propulsion Laboratory	[A62, A399]
Dr. Edward Wollack	NASA Goddard Space Flight Center	[A266]
Ms. Jackie Wong	University of California, Berkeley	[A274, A319, A383, A439, A440, A497]
Mr. Harry Woo	NASA Jet Propulsion Laboratory	[A298]
Mr. James Wood	NASA Kennedy Space Center	[A415]
Mr. Russell Woodall	NASA Jet Propulsion Laboratory	[A52]
Mr. James Wooten	Houston Museum of Natural Science	[A387]
Mr. Jesse Worth	University of Chicago	[A215]
Mr. Shawn Wright	Arizona State University	[A89, A145]
Dr. Shonte Wright	NASA Jet Propulsion Laboratory	[A301, A501]
Mr. Gilead Wurman	Arizona State University	[A302, A417, A418]
Dr. Michael Wyatt	Arizona State University	[A418]
Mr. Terry Wysocky	NASA Jet Propulsion Laboratory	[A416]
Mr. Peter Xaypraseuth	NASA Jet Propulsion Laboratory	[A301, A381, A415, A417]
Dr. Xiangming Xiao	University of New Hampshire	[A8]
Mr. Puck-Fai Yan	Johns Hopkins University Applied Physics Laboratory	[A309]
Ms. Joan Yanagihara	University of Hawaii at Hilo	[A427]
Dr. Ping Yang	Texas A&M University	[A8]
Dr. Wenli Yang	George Mason University	[A12]
Dr. Joseph Yavitt	Cornell University	[A8]
Mr. Albert Yen	NASA Jet Propulsion Laboratory	[A384, A418, A478]
Dr. Donald Yeomans	NASA Jet Propulsion Laboratory	[A398]
Dr. James Yoder	University of Rhode Island	[A8]
Mr. Tung-Han You	NASA Jet Propulsion Laboratory	[A417]
Mr. Andrew Young	Massachusetts Institute of Technology	[A131]
Mr. Chad Young	McDonald Observatory	[A377]
Mr. David Young	NASA Langley Research Center	[A222, A318]
Ms. Donna Young	Tufts University	[A47, A269, A461]
Dr. George Young	Pennsylvania State University	[A12]
Dr. Leslie Young	Massachusetts Institute of Technology	[A309, A422]
Mr. Peng Yue	George Mason University	[A12]
Ms. Karen Yuen	NASA Jet Propulsion Laboratory	[A470]
Dr. Yuk Yung	California Institute of Technology (Caltech)	[A8]
Dr. Yusefi-Zadeh	Northeastern University	[A509]
Dr. Genong Yy	George Mason University	[A12]
Mr. Serjik Zadourian	NASA Jet Propulsion Laboratory	[A415, A417]
Mr. Neal Zapp	NASA Jet Propulsion Laboratory	[A415]
Dr. Dennis Zaritsky	University of Arizona	[A1]
Ms. Charlotte Zeamer	Massachusetts Institute of Technology	[A99]
Dr. Cary Zeitlin	Lawrence Berkeley National Laboratory	[A415]
Dr. Charles Zender	University of California, Irvine	[A8]
Dr. Renyl Zhang	Texas A&M University	[A8]
Dr. Peisheng Zhao	George Mason University	[A12]
Dr. Esther Zirbel	College of Staten Island	[A27, A95]
Dr. Michael Zolensky	NASA Johnson Space Center	[A387]
Dr. Thomas Zurbuchen	University of Michigan	[A9, A125]
Dr. Rich Zurek	NASA Jet Propulsion Laboratory	[A89, A381, A384, A415]

APPENDIX D. SMD E/PO Partners

The NASA Science Mission Directorate is indebted to the more than 500 institutions and organizations that partnered with NASA in FY 2005 to carry out the Education and Public Outreach (E/PO) program. The partners listed below, grouped by the type of institution or organization, contributed to leading the E/PO efforts for NASA Earth and space science missions or programs and/or by leading or contributing substantially to developing E/PO products or activities in FY 2005. The numbers in brackets refer to the missions or programs in appendix B or the products or activities in appendix A to which the partners contributed.

Science Centers, Museums, and Planetariums

Adler Planetarium and Astronomy Museum, Chicago, IL	[A37, A55, A109, A340, A356, A369, A370, A375, A440, A446, B58]
American Museum of Natural History, New York, NY	[A23, A25, A26]
Arizona Science Center, Phoenix, AZ	[A440]
Avampato Discovery Museum, Charleston, WV	[A109, A356]
Bassett Planetarium, Amherst, MA	[A440]
Bishop Museum, Honolulu, HI	[A109, A356, A440]
Carnegie Museum of Natural History, Pittsburgh, PA	[A79, A109, A341, A375, A413, A475, B18]
Carnegie Science Center, Pittsburgh, PA	[A440]
Chabot Space and Science Center, Oakland, CA	[A40, A109, A124, A343, A356, A393, A440, A496, B87]
Challenger Learning Center of Alaska, Kenai, AK	[A440]
Challenger Learning Center of Maine, Bangor, ME	[A109, A356]
Challenger Learning Center of Wheeling, Wheeling, WV	[A268]
Chesapeake Children's Museum, Annapolis, MD	[A371]
Children's Museum of Durango, The, Durango, CO	[A102, A109]
Christa McAuliffe Planetarium, Concord, NH	[A109, A356, A440]
Clark Planetarium, Salt Lake City, UT	[A468]
Coca-Cola Space Science Center, Columbus, GA	[A440]
Denver Museum of Nature and Science, Denver, CO	[A41, A109, A335, A440, A492]
Discover Center Science Museum, Fort Collins, CO	[A41]
Dreyfus Planetarium, Newark, NJ	[A440]
Exploratorium, San Francisco, CA	[A109, A440, A520]
Fernbank Science Center, Atlanta, GA	[A109, A356, A440, A500]
Fiske Planetarium, Boulder, CO	[A41]
Franklin Institute Science Museum, Philadelphia, PA	[A421, A440]
Green Bank National Radio Astronomy Observatory, Green Bank, WV	[A43, A440]
H.B. Owens Planetarium, Lanham, MD	[A440]
Houston Museum of Natural Science, Houston, TX	[A79, A109, A162, A292, A297, A341, A376, A387, A413, A414, A440, A501]
Imaginarium Science Discovery Center, Anchorage, AK	[A440]
Japanese Planetarium, Tokyo, Japan	[A440]
Lafayette Natural History Museum and Planetarium, Lafayette, LA	[A109, A356]
Lawrence Hall of Science, Berkeley, CA	[A82, A91, A109, A186, A335, A357, A479, A510, B50]
Liberty Science Center, Jersey City, NJ	[A23]
Little Thompson Observatory, Berthoud, CO	[A41]
LodeStar Astronomy Center, Albuquerque, NM	[A79, A109, A440]
Louisiana Art and Science Museum, Baton Rouge, LA	[A79, A440]
Maryland Science Center, Baltimore, MD	[A90, A109, A356, A373, A440]
Midland Center for the Arts, Midland, MI	[A347]
Mueller Planetarium, Lincoln, NE	[A484]
Muncie Community School District, Muncie, IN	[A440]
Museum of Natural History and Planetarium, Providence, RI	[A440]
Museum of Science, Boston, MA	[A11, A50, A91, A96, A109, A158, A218, A219, A221, A337, A338, A339, A344, A362, A363, A440, A479, A483, A486, A507, A514, B40]
Museum of the Rockies, Bozeman, MT	[A109, A314, A356]

Navajo Nation Museum, Window Rock, AZ	[A102]
New Detroit Science Center, Detroit, MI	[A109]
Oregon Museum of Science and Industry, Portland, OR	[A79, A342, B15]
Orlando Science Center, Orlando, FL	[A109, A356]
Rice Northwest Museum of Rocks and Minerals, Hillsboro, OR	[A368]
Science Center of Connecticut, West Hartford, CT	[A440]
Science Center of Iowa, Des Moines, IA	[A505]
Science Central, Fort Wayne, IN	[A109, A356, A440]
Science Museum of Virginia, Richmond, VA	[A336]
Smithsonian National Air and Space Museum (NASM), Washington, DC	[A109, A228, A233, A345, A440]
South Carolina State Museum, Columbia, SC	[A367]
South Florida Science Museum, West Palm Beach, FL	[A440]
Space Center Houston, Houston, TX	[A440]
St. Louis Science Center, St. Louis, MO	[A109, A501]
Wernher von Braun Planetarium, Huntsville, AL	[A109, A500]
Whitaker Center for Science and the Arts, Harrisburg, PA	[A46]

Education Institutions and Organizations

School Districts

Albuquerque Public Schools, Albuquerque, NM	[A109, A235]
Arlington Public Schools, Arlington, MA	[A176]
East Side Union High School District, San Jose, CA	[A246]
Hawaii Public Schools, Honolulu, HI	[A98]
Howard County Public Schools, Ellicott City, MD	[A83]
Madison Metropolitan School District, Madison, WI	[A56]
Northside Independent School District, San Antonio, TX	[A109]
Pattonville School District, St. Louis, MO	[A159]
Portland Public Schools, Portland, OR	[A368]
Providence Public Schools, Providence, RI	[A119]
Rio Rancho Public Schools, Rio Rancho, NM	[A109, A235]
Roswell Independent School District, Roswell, NM	[A404]
Southern Cayuga Central Schools, Aurora, NY	[A36]
Texas State School for the Blind, Austin, TX	[A110, A164, A265]
Window Rock Unified School District, Window Rock, AZ	[A102, A109]

State/City Government

Wisconsin Department of Public Instruction, Madison, WI	[A166]
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Professional Education Societies

American Association for the Advancement of Science, Washington, DC	[A109, A228, A233, A501]
American Geophysical Union, Washington, DC	[A109, A228, A233, A520]
Association for Experiential Education (AEE):	
Natives, Africans, Asians, Latinos(as), and Allies, Boulder, CO	[A102]
Association of Science-Technology Centers, Washington, DC	[A228, A360]
International Planetarium Society, Los Angeles, CA	[A501]
National Organization for the Professional Advancement of Black Chemists and	
Chemical Engineers (NOBCChE), Washington, DC	[A508]
Universities Space Research Association, Columbia, MD	[A133, B13]

Education Nonprofits

Center for Educational Technologies, Wheeling, WV	[A90, B39]
Colorado Science Convention Committee, Franktown, CO	[A492]
Indigenous Education Institute, Bluff, UT	[A109, A520]
Institute for Global Environmental Strategies, Arlington, VA	[A54, A130, A134, A136, A139, A140, A141, A146, A147, A150, A151, A152, A153, A154, A156, A163, A165, A167, B12]
Lewis Center for Educational Research, Apple Valley, CA	[A62, A63, A275, A276, A277, A278, A279]
Mid-continent Research for Education and Learning, Aurora, CO	[A146]
National Alliance of Black School Educators (NABSE), Washington, DC	[A194]
National Federation of the Blind, Baltimore, MD	[A316, A373]
Ridgefield Discovery Center, Ridgefield, CT	[A109]
Scientists in Education Working Group, Boulder, CO	[A109, A520]

Space Science Institute, Boulder, CO	[A102, A109, A189, A191, A335, A357, A359, A360, A468, A492, A517, A520, B42]
Timothy Smith Network Center, Roxbury, MA	[A378]

Commercial

Jeff Kennedy Associates, Inc., Somerville, MA	[A337, A360]
Loch Ness Productions, Groton, MA	[A359]
Mystic Scenic Studios, Dedham, MA	[A360]
Randi Korn and Associates, Inc., Alexandria, VA	[A360]
Superior Exhibits and Design, Inc., Elk Grove Village, IL	[A337]

NASA Educator Resource Centers

NASA Jet Propulsion Laboratory Educator Resource Center, Pomona, CA	[A67]
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Colleges and Universities

Nonminority Colleges and Universities

Arizona State University, Tempe, AZ	[A89, A109, A145, A228, A302, A303, A379, A419, A501]
Austin College, Sherman, TX	[A109, A133]
Ball State University, Muncie, IN	[A109, A501]
Boston University, Boston, MA	[A109, A228]
Brown University, Providence, RI	[A119]
California Institute of Technology (Caltech), Pasadena, CA	[A9, A109, A111, A174, A228, A249, A335, A359, A438, A450, A501, A520, B52]
Carnegie Mellon University, Pittsburgh, PA	[A375]
Catholic University of America, Washington, DC	[A28]
City University of New York (CUNY) Lehman College, Bronx, NY	[A12]
Clemson University, Clemson, SC	[A109, A228]
College of Charleston, Charleston, SC	[B41]
Colorado State University, Fort Collins, CO	[A228]
Cornell University, Ithaca, NY	[A20, A36, A109, A228, A501, B107]
DePaul University, Chicago, IL	[A31, A93, A109, A132, A166, A183, A228, A316, A382, A491, A501, A508, B37]
East Tennessee State University, Johnson City, TN	[A160]
Essex County College, Hoboken, NJ	[A15]
Foothill Community College, Los Altos Hills, CA	[A11]
George Mason University, Fairfax, VA	[A12]
George Washington University, Washington, DC	[A109, A501]
Grand Valley State University, Allendale, MI	[A109, A356]
Harvard University, Cambridge, MA	[A109, A228, A372, A501]
Illinois State University, Normal, IL	[A109, A228]
Institute for Astronomy, Honolulu, HI	[A109, A228]
International Arctic Research Center, Fairbanks, AK	[A109, A228]
Johns Hopkins University, Baltimore, MD	[A109, A228, A266]
Kansas State University, Salina, KS	[A109, A216]
Lehigh University, Bethlehem, PA	[A109, A133]
Leslie University, Cambridge, MA	[A337]
Loma Linda University, Loma Linda, CA	[A109, A133]
Louisiana State University, Baton Rouge, LA	[A29]
Macomb County Community College, Warren, MI	[A109, A501]
Massachusetts Institute of Technology, Cambridge, MA	[A99, A109, A131, A228, A378, A386, A451, B67]
Michigan State University, East Lansing, MI	[A175]
Minnesota University, Minneapolis, MN	[A147]
Montana State University, Bozeman, MT	[A109, A216, A314, A324]
Morehead State University, Morehead, KY	[A139, A141]
New Jersey Institute of Technology, Newark, NJ	[A23, A26]
North Carolina State University, Raleigh, NC	[A73]
Northern Arizona University, Flagstaff, AZ	[A109, A216]

Northern Illinois University, DeKalb, IL	[A12]
Northwestern University, Evanston, IL	[A340]
Pennsylvania State University, University Park, PA	[A12, A16, A46, A81]
Plymouth State University, Plymouth, NH	[A153, A154]
Portland State University, Portland, OR	[A368]
Potomac State College, Keyser, WV	[A329]
Princeton University, Princeton, NJ	[A37, A331, A446, B58]
Rice University, Houston, TX	[A79, A80, A109, A162, A208, A228, A240, A292, A295, A296, A297, A341, A355, A387, A390, A394, A414, A474, A475, B18, B75, B81, B86]
Rutgers University, Piscataway, NJ	[A23, A26, A131]
San Jose State University, San Jose, CA	[A156]
Sonoma State University, Rohnert Park, CA	[A61, A64, A74, A81, A84, A129, A261, A272, A320, A333, A388, A403, A441, A447, B47, B57, B69]
South Dakota School of Mines and Technology, Rapid City, SD	[A109, A228]
Southern Connecticut State University, New Haven, CT	[A23, A26]
Southern Illinois University, Carbondale, IL	[A109, A228]
Stanford University, Stanford, CA	[A48, A109, A169, A228, A238, A271, A408, A499, B48, B91]
State University of New York (SUNY), Stony Brook, Stony Brook, NY	[A23, A26, A109, A228]
Stevens Institute of Technology, Hoboken, NJ	[A15, A23, A26]
Tufts University, Medford, MA	[A11, A20, A47]
University of Alabama at Huntsville, Huntsville, AL	[A504]
University of Alaska, Fairbanks, Fairbanks, AK	[A109, A133, A171, A228]
University of Arizona, Tucson, AZ	[A13, A102, A109, A228, A375, A520]
University of California, Santa Barbara, Santa Barbara, CA	[A231]
University of California, Santa Cruz, Santa Cruz, CA	[A272]
University of Chicago, Chicago, IL	[A109, A228]
University of Colorado, Boulder, Boulder, CO	[A109, A185, A214, A228, A230, A360, A374, A414, A492, A520, B78]
University of Florida, Gainesville, FL	[A440]
University of Houston, Houston, TX	[A109, A376, A501]
University of Idaho, Moscow, ID	[B16, B17]
University of Illinois at Chicago, Chicago, IL	[A369]
University of Illinois at Urbana-Champaign, Urbana, IL	[A109, A133]
University of Maryland, College Park, MD	[A51, A109, A228, A397, A398, B108, B371]
University of Massachusetts, Lowell, Lowell, MA	[A373]
University of Michigan, Ann Arbor, MI	[A175]
University of Missouri-Kansas City, Kansas City, MO	[A109, A133]
University of Missouri-St. Louis, St. Louis, MO	[A109, A228]
University of Nebraska at Omaha, Omaha, NE	[A150, A151]
University of Nebraska-Lincoln, Lincoln, NE	[A484]
University of New Hampshire, Durham, NH	[A109]
University of Northern Colorado, Greeley, CO	[A109, A133]
University of Southern California, Los Angeles, CA	[A34]
University of Southern Maine, South Portland, ME	[A91, A109, A479]
University of Tennessee, Knoxville, TN	[A109, A375]
University of Tennessee at Martin, Martin, TN	[A163]
University of Texas at Austin, Austin, TX	[A39, A60, A67, A68, A69, A70, A71, A72, A85, A109, A110, A112, A127, A164, A173, A199, A228, A265, A283, A284, A285, A286, A287, A288, A289, A290, A377, A407, A414, A485, A493, A494]
University of Texas at Dallas, Richardson, TX	[A12]
University of Toledo, Toledo, OH	[A165]
University of Utah, Salt Lake City, UT	[A109, A228]

University of Virginia, Charlottesville, VA	[A18, A128, A336]
University of Washington, Seattle, WA	[A98, A104, A109, A228, A245, A312, A425, A426, A427, B43]
University of Wisconsin-Fox Valley, Menasha, WI	[A166]
University of Wisconsin-Madison, Madison, WI	[A18, A56]
University of Wisconsin-Madison, Madison, WI	[A119]
University of Wisconsin-Madison, Madison, WI	[A137, A138, A231, A505]
University of Wyoming, Laramie, WY	[A109, A133, A332]
Vanderbilt University, Nashville, TN	[A35, A57, A457]
Washington University, St. Louis, MO	[A109, A159, A228, A450, A501]
Western Kentucky University, Bowling Green, KY	[A140, B330]
Wright State University, Dayton, OH	[A167]
Yerkes Observatory, University of Chicago, Williams Bay, WI	[A109, A190, A228, A400]

Historically Black Colleges and Universities

Alabama A&M University, Normal, AL	[A17, A130]
Bennett College, Greensboro, NC	[A22]
Clark Atlanta University, Atlanta, GA	[A109, A133]
Fisk University, Nashville, TN	[A35]
Hampton University, Hampton, VA	[A30, A136, B393]
Howard University, Washington, DC	[A109, A133, A440, A501]
Jackson State University, Jackson, MS	[A109, A133]
Morgan State University, Baltimore, MD	[A109, A133]
Norfolk State University, Norfolk, VA	[A18, A128]
South Carolina State University, Orangeburg, SC	[A22]
Southern University and A&M College, Baton Rouge, LA	[A29]
Talladega College, Talladega, AL	[A22]
Tennessee State University, Nashville, TN	[A57]
Texas Southern University, Houston, TX	[A387]
University of the District of Columbia, Washington, DC	[A28]

Hispanic-Serving Institutions

California State University, Los Angeles, Los Angeles, CA	[A34]
California State University, Monterey Bay, Seaside, CA	[A133]
California State University, San Bernardino, San Bernardino, CA	[A14]
City University of New York (CUNY) LaGuardia Community College, Long Island, NY	[A23, A26]
CUNY City College of New York, New York, NY	[A23, A26, A109, A228]
New Mexico State University, Las Cruces, Las Cruces, NM	[A109, A133, A152]
Pasadena City College, Pasadena, CA	[A34]
Polytechnic University of Puerto Rico, San Juan, PR	[A109, A133]
University of Houston-Downtown, Houston, TX	[A109, A228, A387, A501, B27]
University of Miami, Miami, FL	[A109, A133]
University of New Mexico, Albuquerque, NM	[A109, A235, A361]
University of Puerto Rico at Mayagüez, Mayagüez, PR	[A101]
University of Texas at Brownsville, Brownsville, TX	[A109, A387, A501]

Minority-Predominant Institutions

City University of New York (CUNY) Medgar Evers College, Brooklyn, NY	[A20, A23, A24, A25, A26, A27, A109, A228]
City University of New York (CUNY) Queensborough Community College, Bayside, NY	[A23, A26]
CUNY Hunter College, New York, NY	[A23, A26]
Orangeburg-Calhoun Technical College, Orangeburg, SC	[A22]
University of California, Berkeley, Berkeley, CA	[A49, A103, A109, A114, A115, A116, A117, A118, A121, A122, A195, A228, A240, A270, A274, A311, A317, A383, A424, A439, A487, A495, A497, A519, A520, B36, B54, B74, B76, B88]
University of California, Los Angeles, Los Angeles, CA	[A109, A135, A249]
University of Hawaii at Hilo, Hilo, HI	[A109, A133]
University of Texas at El Paso, El Paso, TX	[A109, A199, A228]

Organizations Promoting Minority Participation in Science

Coalition to Diversify Computing, Evanston, IL	[A508]
Colorado Mathematics, Engineering, Science Achievement (MESA), Denver, CO	[A102, A109, A492]
Expanding Your Horizons, Orem, UT	[A468]
Imaginary Lines, Los Angeles, CA	[A313]
Institute for African American e-Culture, Boston, MA	[A508]
Minority University-Space Interdisciplinary Network (MU-SPIN), Greenbelt, MD	[A23]
National Association of Black Geologists and Geophysicists, Houston, TX	[A508]
National Society of Black Physicists, Arlington, VA	[A508]
National Society of Hispanic Physicists, Nashville, TN	[A508]
Society for Advancement of Chicanos and Native Americans in Science (SACNAS), Santa Cruz, CA	[A102]

Science Institutions and Organizations**NASA Headquarters Offices**

NASA Headquarters, Washington, DC	[A26, A102, A107, A109, A228, A233, A253, A445, A501]
NASA Headquarters Office of Education, Washington, DC	[A28, A29, A34, A95, A109, A501]
NASA Headquarters Office of Public Affairs, Washington, DC	[A109, A228, A233, A501]
NASA Headquarters Science Mission Directorate, Washington, DC	[A4, A5, A8, A95, A109, A228, A233, A501, B14, B28, B30, B31]
NASA Headquarters Space Operations Mission Directorate, Washington, DC	[A109, A501]

NASA Centers

NASA Ames Research Center, Moffett Field, CA	[A38, A109, A155, A215, A228, A233, A236, A237, A264, A301, A359, A401, A429, A430, A431, A432, A448, A466, A468, A488, A501, B53]
NASA Glenn Research Center, Cleveland, OH	[A109, A161, A228, A233, A501]
NASA Goddard Institute for Space Studies, New York, NY	[A23, A26, A109, A228, A233, A466]
NASA Goddard Space Flight Center, Greenbelt, MD	[A6, A18, A19, A22, A23, A26, A28, A33, A42, A43, A44, A45, A58, A74, A75, A76, A77, A78, A83, A86, A87, A88, A95, A101, A102, A107, A109, A118, A126, A128, A144, A172, A177, A178, A179, A180, A181, A182, A184, A187, A188, A193, A196, A197, A198, A201, A202, A203, A204, A205, A206, A207, A208, A209, A210, A211, A212, A213, A217, A220, A223, A224, A225, A226, A228, A229, A232, A233, A234, A239, A250, A251, A253, A254, A255, A256, A258, A259, A263, A266, A273, A291, A293, A310, A315, A319, A330, A371, A373, A389, A391, A396, A402, A404, A410, A411, A412, A414, A428, A433, A434, A435, A439, A440, A443, A445, A449, A450, A451, A465, A466, A469, A471, A473, A474, A476, A501, A519, A520, B5, B6, B36, B46, B56, B65, B68, B73,

NASA Jet Propulsion Laboratory, Pasadena, CA	B75, B77, B80, B84, B90, B91, B408, B417] [A7, A10, A13, A21, A51, A52, A53, A62, A89, A109, A125, A145, A157, A179, A180, A181, A182, A220, A223, A224, A225, A229, A241, A242, A243, A267, A275, A276, A277, A278, A279, A281, A290, A294, A298, A299, A300, A301, A302, A303, A307, A327, A328, A358, A366, A379, A381, A384, A385, A392, A399, A406, A415, A416, A417, A418, A419, A444, A445, A453, A454, A455, A456, A458, A463, A464, A470, A477, A478, A481, A482, A489, A490, A502, A503, A513, B34, B51, B55, B59, B64, B71, B72, B92, B94, B95, B96, B97, B106, B108, B111, B113, B114, B373, B410]
NASA Johnson Space Center, Houston, TX	[A14, A59, A102, A109, A228, A233, A359, A387, A466, A501, B112]
NASA Kennedy Space Center, Kennedy Space Center, FL	[A109, A228, A233, A501]
NASA Langley Research Center, Hampton, VA	[A77, A94, A102, A109, A194, A210, A222, A228, A280, A318, A466, A501, B17, B20]
NASA Marshall Space Flight Center, Marshall Space Flight Center, AL	[A109, A228, A233, A247]
NASA Wallops Flight Facility, Wallops Island, VA	[A20]
NASA-Affiliated Organizations	
Chandra X-ray Center, Cambridge, MA	[A109, A228, A233, A459, A460]
Deep Space Network, Madrid, Spain	[A109, A501]
Georgia Space Grant Consortium, Atlanta, GA	[A228]
Goldstone Deep Space Communications Complex, Fort Irwin, CA	[A109, A281, A282, A405, A406, A501]
Lunar and Planetary Institute, Houston, TX	[A108, A109, A143, A359, A387, A462, A501, B38]
Massachusetts Space Grant Consortium, Cambridge, MA	[A11]
Mid-Atlantic Region Space Science Broker (MARSSB), Wheeling, WV	[A20, A94, A120, A161, A313, A329, A506, A516, B39]
Montana NASA Space Grant, Bozeman, MT	[A114, A121]
NASA Astrobiology Institute (NAI), Moffett Field, CA	[A3, A102, A109, A148, A233, A306, A364, A480, A512, B62]
NASA Explorer Schools, Washington, DC	[A102]
NASA Kennedy Space Center Visitor Center, Kennedy Space Center, FL	[A501]
New England Space Science Initiative in Education (NESSIE), Boston, MA	[A11, A20]
Ohio Aerospace Institute, Cleveland, OH	[B27]
Oregon Space Grant Consortium, Corvallis, OR	[A245, A312]
Pennsylvania Space Grant Consortium, University Park, PA	[A46, A109]
Southeast Regional Clearinghouse (SERCH), Charleston, SC	[A32, A192, A248, A257]
Space Telescope Science Institute, Baltimore, MD	[A2, A57, A100, A109, A110, A200, A213, A216, A217, A227, A228, A233, A235, A244, A258, A259, A346, A347, A348, A349, A350, A351, A352, A353, A354, A359, A409, A437, A472,

Spitzer Science Center/California Institute of Technology, Pasadena, CA	A484, A500, A501, A509, B26, B33, B49, B343]
Stratospheric Observatory For Infrared Astronomy (SOFIA), Moffett Field, CA	[A174]
Universities Space Research Association, Moffett Field, CA	[A109, A520]
Washington Space Grant Consortium, Seattle, WA	[A109, A236, A430]
	[A312]

Other Federal Agencies

Air Force Research Laboratory, Hanscom Air Force Base, MA	[A109, A228]
Brookhaven National Laboratory, Upton, NY	[A23, A26]
European Space Agency (ESA), Paris, France	[A109, A359]
European Space Agency Research and Technology Centre, Noordwijk, Netherlands	[A109, A228, A233]
Fermi National Accelerator Laboratory, Batavia, IL	[A109, A228, A233]
Lawrence Livermore National Laboratory, Livermore, CA	[A22]
Los Alamos National Laboratory, Los Alamos, NM	[A142, A450, B423]
National Center for Space, Earth, and Flight Sciences Education (NCSEFSE), Washington, DC	[A92]
National Oceanic and Atmospheric Administration (NOAA), Boulder, CO	[A109, A228, A233]
National Science Foundation, Arlington, VA	[A11, A109, A228, A337, A360, A501, A520]
National Severe Storms Laboratory, Norman, OK	[A109, A228]
U.S. Air Force, Washington, DC	[A109, A228, A501]
U.S. Department of Agriculture (USDA) Foreign Agricultural Service, Washington, DC	[A109, A466]
U.S. Geological Survey, Flagstaff, AZ	[A109, A228, A233, A359, A501]
U.S. Naval Observatory, Washington, DC	[A109, A228, A501]

Professional Science Societies

American Astronomical Society, Washington, DC	[A11, A109, A410, A520]
International Technology Education Association, Reston, VA	[A242]
National Science Teachers Association, Arlington, VA	[A70]
Planetary Society, Pasadena, CA	[A109, A501]

Industry

Analytical Graphics, Inc., Malvern, PA	[A109, A228]
Ball Aerospace Technologies Corporation, Boulder, CO	[A109, A501]
Boeing Company, The, Everett, WA	[A109, A501]
Idaho Helicopters, Inc., Boise, ID	[A228, A501]
ILC Dover, Inc., Frederica, DE	[A109, A228, A233, A501]
Lockheed Martin Advanced Technology Center, Palo Alto, CA	[A109, A228, A233, A246, A390]
Lockheed Martin Solar and Astrophysics Laboratory, Palo Alto, CA	[A233, A323, A326, A443]
Lockheed Martin Space Systems, Littleton, CO	[A109, A228, A501]
Malin Space Science Systems, La Jolla, CA	[A109, A228, A233, A359, A501]
Science Systems and Applications, Inc., Lanham, MD	[A65, A92, A113, A304, A380, A401, A420, B109]
U.S. Satellite Laboratory, Rye, NY	[A168, A169, A262, B25]

Other Nonprofits

Astronomical Society of the Pacific, San Francisco, CA	[A11, A38, A95, A109, A155, A215, A236, A237, A308, A365, A431, A452]
Carnegie Institution of Washington, Washington, DC	[A109, A228, A233]
Carnegie Observatories, Pasadena, CA	[A109, A228, A233]
European Southern Observatory, Santiago, Chile	[A109, A228, A233]
Gemini Observatory, Hilo, HI	[A109, A228, A233]
Harvard-Smithsonian Center for Astrophysics, Cambridge, MA	[A1, A29, A47, A50, A55, A95, A105, A109, A170, A175, A176, A196, A197, A198, A212, A226, A228, A232, A233, A254, A255, A256, A269, A305, A308, A323, A325, A337, A356, A372, A396, A436, A459, A461, A515, A518, B6, B35, B44]

Johns Hopkins University Applied Physics Laboratory, Laurel, MD	[A97, A109, A123, A228, A233, A309, A321, A322, A395, A422, A423, A442, B82, B83, B89, B105]
Lowell Observatory, Flagstaff, AZ	[A109, A233]
Marine Biological Laboratory, Woods Hole, MA	[A109, A228, A233]
Mount Wilson Observatory, Mount Wilson, CA	[A109, A228]
National Academy of Sciences, Washington, DC	[A109, A520]
National Center for Atmospheric Research, Boulder, CO	[A109, A228, A233, A498, A501]
National Optical Astronomy Observatory, Tucson, AZ	[A11]
National Radio Astronomy Observatory, Socorro, NM	[A109, A228]
National Solar Observatory, Sunspot, NM	[A109, A228, A233]
Northeast Kansas Amateur Astronomers' League, Topeka, KS	[A467]
Pisgah Astronomical Research Institute, Rosman, NC	[A22, A73]
Planetary Science Institute, Tucson, AZ	[A22]
Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, CA	[A38, A82, A106, A109, A215, A228, A233, A236, A335, A357, A359, A375, B50]
Southwest Research Institute, Boulder, CO	[A41, A109]
Southwest Research Institute, San Antonio, TX	[A109, A233, A296, A334, A414]
Universities Space Research Association, Whitelaw, WI	[A133, B13]
University Corporation for Atmospheric Research, Boulder, CO	[A66, A109, A149, A228, A252, A260, A498, A520, B16]
W.M. Keck Observatory, Kamuela, HI	[A109, A228]
Wisconsin Science Network, DeForest, WI	[A166]
Woods Hole Oceanographic Institute, Woods Hole, MA	[A109, A228, A233]

Community Organizations

Back Bay Amateur Astronomers, Chesapeake, VA	[A18]
Boys & Girls Clubs of Wyoming, Casper, WY	[A332]
Chicago Astronomical Society, Chicago, IL	[A491]
Girl Scouts of Central Maryland, Baltimore, MD	[A266]
Girl Scouts Totem Council, Seattle, WA	[A425]
Los Angeles Better Educated Students for Tomorrow (LA's BEST), Los Angeles, CA	[A294]
National Science Teachers Association, Seattle, WA	[A69]

Mass Media

Public Radio/TV Station(s)

KETC-TV, Channel 9/St. Louis, St. Louis, MO	[A109, A501]
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Commercial Radio/TV Station(s)

CBS Corporation, New York, NY	[A360]
Starizona Adventures In Astronomy & Nature, Tucson, AZ	[A411]

Newspapers and Magazines

"Chronicle-Telegram", Elyria, OH	[A490]
"Daily Courier", Kelowna, Canada	[A490]
"Denver Post", Denver, CO	[A490]
"El Hispano", Dallas, TX	[A490]
"El Nuevo Dia", Guaynabo, PR	[A490]
"Herald Standard", Uniontown, PA	[A490]
"La Oferta", San Jose, CA	[A490]
"La OpiniUn", Los Angeles, CA	[A490]
"Los Angeles Times", Los Angeles, CA	[A490]
"National Association for Bilingual Education (NABE) News", Washington, DC	[A489]
"Noticias del Mundo", Long Island City, NY	[A490]
"Prensa Hispana", Phoenix, AZ	[A490]
"Sentinel, The", Seabrook, MD	[A490]
"South Bend Tribune", South Bend, IN	[A490]
"Times Record", Brunswick, ME	[A490]
"Vistazo", San Jose, CA	[A490]

APPENDIX E. Conferences

The conferences at which the NASA Earth and space science Education and Public Outreach (E/PO) program had a substantial presence in FY 2005 are listed below. The numbers in brackets refer to the activities in appendix A that were carried out at the conferences.

National Education and Outreach

12th Annual Science Olympiad Coaches Clinic, Hammond, IN, October 2004	[A47]
2005 Astronomical League National Conference, Overland Park, KS, August 2005	[A452]
2005 Penn State Workshops for Science Educators, University Park, PA, July 2005	[A64]
26th Annual American Indian Society for Engineering and Science National Conference, Anchorage, AK, November 2004	[A104, A122, A417]
American Association of Physics Teachers, Albuquerque, NM, January 2005	[A47, A48, A81, A115]
American Association of Physics Teachers, Salt Lake City, UT, August 2005	[A79, A109]
American Association of Physics Teachers Conference, Salt Lake City, UT, August 2005	[A355, A394]
Association for Science Teacher Education (ASTE) Annual Conference, Colorado Springs, CO, January 2005	[A117]
Astronomical Society of the Pacific 117th Annual Meeting, Tucson, AZ, September 2005	[A38, A100, A104, A105, A440, A472, A488, A510, A514, A518, A520]
Before the First Day of School: Pre-Service Teacher Prep and Role of Earth and Space Science Community, Houston, TX, March 2005	[A159]
Council for Exceptional Children Convention & Expo, Baltimore, MD, April 2005	[A236, A373, A440]
Earth Science Educator Roadmap Community, Pacific Grove, CA, November 2004	[A520]
Earth System Science Education in the 21st Century Annual Meeting 2005, Fairbanks, AK, August 2005	[A12]
Exceptional Space Science Materials for Exceptional Students, Huntsville, AL, July 2005	[A373]
Extreme Solar System for Girl Scout Trainers, Big Rapids, MI, February 2005	[A379]
Federation of Earth Science Information Partners–14th ESIAP Assembly, Washington, DC, January 2005	[A12]
Federation of Earth Science Information Partners–15th ESIAP Assembly, San Diego, CA, June 2005	[A12]
Girls Scouts, Briarcliff Manor, NY, December 2004	[A215]
Hands-On Universe: Teacher Resource Agent Conference, Williams Bay, WI, August 2005	[A64]
Intel International Science and Engineering Fair, Phoenix, AZ, May 2005	[A64]
International Education, Raleigh, NC, March 2005	[A64]
MOREnet and Missouri Department of Elementary and Secondary Education, Osage Beach, MO, October 2004	[A81]
NASA Pre-Service Teacher Conference, Alexandria, VA, February 2005	[A94]
National Afterschool Association, San Antonio, TX, February 2005	[A52, A53, A59, A64, A81, A120, A299, A379, A472]
National Conference of State Legislatures, Seattle, WA, August 2005	[A425]
National Council for the Teachers of Mathematics, Anaheim, CA, April 2005	[A253, A392]
National Science Teachers Association National Conference, Dallas, TX, March 2005	[A37, A44, A47, A48, A51, A61, A64, A69, A75, A76, A78, A79, A81, A82, A89, A97, A100, A104, A106, A118, A123, A126, A129, A200, A253, A301, A321, A381, A387, A392, A417, A440, A472, A510]

National Teacher Training Institute, Harrisonburg, VA, March 2005	[A58]
Neighborhood Networks 10th Anniversary National Training Conference, Lake Buena Vista, FL, June 2005	[A299]
New England Science Teachers Retreat, Cambridge, MA, October 2004	[A64]
Science Olympiad National Tournament 2005, Urbana, IL, May 2005	[A269]
Society for the Advancement of Chicanos and Native Americans in Science National Conference 2004, Austin, TX, October 2004	[A49, A118, A195]
Society for the Advancement of Chicanos and Native Americans in Science National Conference 2005, Denver, CO, September 2005	[A102, A297]
Teaching to Transform Culture Educator Convention, Portland, OR, October 2004	[A76]

Regional Education and Outreach

2005 Governor's Conference on Career Education, Detroit, MI, February 2005	[A64]
2005 Middle Atlantic Planetarium Society Conference, Philadelphia, PA, May 2005	[A356, A421]
AeroExpo V, Moffett Field, CA, April 2005	[A264, A432]
Arizona Science Teachers Annual Conference, Mesa, AZ, September 2004	[A64, A89]
Arizona State University and the University of Arizona Trainer of Trainers, Tempe, AZ, October 2004	[A64]
Astrofest 2005, Kankakee, IL, September 2005	[A491]
Balloon Fest 2005, Paso Robles, CA, April 2005	[A272]
Blue Ridge East Teacher Training Institute, Cloverdale, VA, April 2005	[A81]
Blue Ridge West Teacher Training Institute, Bristol, VA, June 2005	[A81]
California Art Education Association Conference, Riverside, CA, November 2004	[A299]
California Charter Schools Conference 2005, Pasadena, CA, January 2005	[A62]
California Science Teachers Association Conference, San Jose, CA, October 2004	[A38, A48, A49, A64, A67, A81, A84, A103, A106, A115, A116, A117, A129, A195, A241, A446, A452]
Central Western Oregon Science Expo, Monmouth, OR, March 2005	[A104]
Conference for the Advancement of Science Teaching (CAST), Corpus Christi, TX, November 2004	[A53, A59, A70, A79, A89, A108, A387]
Connecting Learning Communities, Parkville, MO, July 2005	[A81]
Council of Math Science Educators of San Mateo County Conference, Redwood City, CA, March 2005	[A118]
Expanding Your Horizons—Sonoma County Conference, Santa Rosa, CA, March 2005	[A272, A320]
Experimental Aircraft Association Oshkosh Air Show, Oshkosh, WI, July 2005	[A448, A452]
Florida Association of Science Teachers Annual Meeting, Orlando, FL, October 2004	[A84]
Great Lakes Planetarium Association Annual Conference, Troy, MI, October 2004	[A382]
Hoosier Association of Science Teachers, Inc., Annual Convention, Indianapolis, IN, February 2005	[A64]
Idaho Science Teachers Association, Lewiston, ID, October 2004	[A104]
Ignite Learning, Detroit, MI, March 2005	[A64]

Illinois Council of Teachers of Mathematics Annual Conference, Springfield, IL, October 2004	[A64]
Juan de Fuca Festival of the Arts, Port Angeles, WA, May 2005	[A461]
Kansas Association of Teachers of Science (KATS) Camp, Junction, KS, April 2004	[A48, A108]
Kentucky Teaching and Learning Conference, Louisville, KY, March 2005	[A81]
Maine Science Teachers Association Fall Conference 2004, Gardener, ME, October 2004	[A47]
Master Teacher Training Camp: National Teacher Training Institute, Harrisonburg, VA, November 2004	[A81]
Mathematics Reloaded, Langley, Canada, October 2004	[A64]
Mathematics: Governing the Future, Kentucky, KY, October 2004	[A81]
Michigan Earth Science Teachers Association Fall Conference, Hartland, MI, October 2004	[A122]
Michigan Science Teachers Association Conference, Detroit, MI, March 2004	[A122]
Montana Education Association/Montana Federation of Teachers Conference, Helena, MT, October 2004	[A64]
NASA Earth and Space Educators Workshop, Houston, TX, November 2004	[A78]
NASA/Norfolk State University Pre-Service Teacher Program, Alexandria, VA, February 2005	[A200, A472]
National Science Teachers Association Eastern Area Regional Conference, Richmond, VA, December 2004	[A47, A48, A58, A61, A62, A64, A75, A81, A113, A301, A472]
National Science Teachers Association Regional Conference, Indianapolis, IN, November 2004	[A38, A47, A48, A62, A64, A81, A93, A118, A200, A380, A392]
National Science Teachers Association Regional Conference, Seattle, WA, November 2004	[A45, A47, A48, A64, A76, A81, A84, A100, A104, A129, A380]
National Teacher Training Institute—Blue Ridge Community College, Weyers Cave, VA, October 2004	[A42]
New Hampshire Science Teachers Association Annual Meeting, Exeter, NH, March 2004	[A125]
New Jersey Council of Elementary Science 16th Annual Conference, Glassboro, NJ, November 2004	[A61]
New Jersey Science Teachers Association Conference, Somerset, NJ, October 2004	[A61, A129]
New Mexico Science Teachers Association Annual Conference, Albuquerque, NM, November 2004	[A108]
New York State Middle School Annual Conference, Lake Placid, NY, October 2004	[A200]
New York State United Teachers Annual In-Service Conference, Albany, NY, October 2004	[A200]
Northwest Science Expo Interactive Discovery Exhibits, Portland, OR, April 2005	[A104]
Oklahoma Math and Science Rural Partnership, Weatherford, OK, October 2004	[A58]
Oklahoma Science Teachers Association Conference, Tulsa, OK, October 2004	[A58, A108]
Oklahoma State Department of Education Superintendent's Math and Science Conference, Oklahoma City, OK, November 2004	[A58]
Pennsylvania Science Teachers Association Conference, Hershey, PA, December 2004	[A81, A129]
Racing Toward Proficiency: No Teacher Left Behind, Lexington, KY, November 2004	[A81]
Renaissance Visions: Connecting Mathematics, Detroit, MI, October 2004	[A64]
Rural Academy for Math Teachers, Shippensburg, PA, July 2005	[A129]
Sally Ride Science Festival, Pittsburgh, PA, May 2005	[A313]

Sally Ride Science Festival, Tempe, AZ, March 2005	[A272]
Science and Mathematics Educators Conference, Benson, AZ, February 2005	[A64]
Seaborg Center Annual Fall Conference, Marquette, MI, October 2004	[A84]
Southwestern and Rocky Mountain Conference of the American Association for the Advancement of Science, Tucson, AZ, April 2005	[A403]
Space Day at Penn State, University Park, PA, April 2005	[A81, A320]
Space Exploration Educators Conference, Houston, TX, February 2005	[A64, A72, A81, A215]
Spring Science Education Workshop, State College, PA, April 2005	[A81]
Stanford University Community Day 2005, Stanford, CA, April 2005	[A499]
Sun-Earth Connection K-4 Teacher Workshop, Emeryville, CA, June 2005	[A118]
Sun-Earth Connection K-4 Teacher Workshop, Tucson, AZ, September 2005	[A118]
Sun-Earth Connection K-4 Workshop, Oakland, CA, August 2005	[A118]
Utah's Expanding Your Horizons (EYH) Conference, Orem, UT, March 2005	[A236, A468, A472]
Western Alliance of Planetariums Conference 2005, Boulder, CO, September 2005	[A510, A520]
Wisconsin Earth and Space Science Initiative Planning Conference, Menasha, WI, November 2004	[A166]
Wisconsin Society of Science Teachers Annual Convention, La Cross, WI, April 2005	[A81]
Wyoming Math and Science Teachers Conference, Casper, WY, January 2005	[A47, A64, A104]
Wyoming Spring School Improvement Conference, Casper, WY, March 2005	[A64]

Science

36th Lunar and Planetary Science Conference, League City, TX, March 2005	[A375, A462]
3rd High-Energy Astrophysics Workshop for Amateur Astronomers, Las Cruces, NM, March 2005	[A64, A388, A403]
85th American Meteorological Society Annual Meeting, San Diego, CA, January 2005	[A109, A520]
American Astronomical Society 205th Meeting, San Diego, CA, January 2005	[A104, A105, A438, A514, A516, A520]
American Astronomical Society/Division of Planetary Sciences, Louisville, KY, November 2004	[A62, A417, A472, A488, A506, A513]
American Geophysical Union Annual Fall Meeting, San Francisco, CA, December 2004	[A59, A420, A462, A520]
American Geophysical Union Annual Summer Meeting, New Orleans, LA, May 2005	[A78, A414, A514, A520]
American Institute for Aeronautics and Astronautics Space 2005, Long Beach, CA, August 2005	[A62]
American Society for Photogrammetry and Remote Sensing 2005 Annual Conference, Baltimore, MD, March 2005	[A12]
Avionics Maintenance Conference, Atlanta, GA, April 2005	[A236]
Baltimore Science Fiction Convention, Hunt Valley, MD, May 2005	[A510]
Blazar Variability II: Entering the Gamma-ray Large Area Space Telescope (GLAST) Era, North Miami, FL, April 2005	[A64]
Conference on Planet Formation and Detection, Aspen, CO, February 2005	[A510]
Geological Society of America Convention, Denver, CO, November 2005	[A417]

Hofstra/Brookhaven National Laboratory Collegiate Science and Technology Entry Program (CSTEP), Upton, NY, March 2005	[A269]
Infovis 2004, Austin, TX, October 2004.	[A375]
International Council on Systems Engineering Conference, Rochester, NY, July 2005	[A417]
International Geoscience and Remote Sensing Symposium 2005, Seoul, South Korea, July 2005	[A12]
International Space Development Conference, Arlington, VA, May 2005	[A472]
Interpack 2005 Conference, San Francisco, CA, July 2005	[A417]
May Symposium—A Decade of Extrasolar Planets Around Normal Stars, Baltimore, MD, May 2005	[A472]
NASA Balloon Science Workshop: Fostering New Research Partnerships, Ithaca, NY, August 2005	[A20]
NASA's Earth Science Technology Conference 2005, College Park, MD, June 2005	[A12, A79]
NASA's Search for New Worlds, Washington, DC, June 2005	[A513]
Optics & Photonics 2005, San Diego, CA, July 2005	[A27, A395]
Star Formation in the Era of Three Great Observatories, Cambridge, MA, July 2005	[A514]

APPENDIX F. Awards

Awards and other forms of public recognition received by the Science Mission Directorate (SMD) Education and Public Outreach (E/PO) program in FY 2005 are listed below. Each listing contains the following information:

Organization:

Organization making or sponsoring the award.

Award:

Name of the award.

Mission/Program:

SMD mission or program receiving the award.

Activity/Person:

SMD E/PO product or activity, or SMD-affiliated individual receiving the award.

Sponsor	
Organization	Award
Telly Award	Telly Award Winner–Silver
NASA Goddard Space Flight Center	Excellence in Outreach
NASA Goddard Space Flight Center	Excellence in Outreach
Telly Award	Telly Award Finalist
Griffith Observatory	Griffith Observatory Star Award
The Exploratorium	Exploratorium’s 10 Cool Astronomy Award
The Webby Awards	Webby Award Worthy Selection for 2005
NASA Sun-Earth Connection Education Forum	Exemplary Education Product Award
NASA Goddard Space Flight Center	Group Achievement Award
U.S. Department of Housing and Urban Development	Partners in Progress
National Association of Telecommunications Officers and Advisors (NATOA)	NATOA Government Programming Awards
NASA Goddard Space Flight Center	Excellence in Outreach
NASA Goddard Space Flight Center	Excellence in Outreach Program Award
“American Scientist” Magazine Online	Site of the Week
“The Helix” Science Education Magazine	Favorite Site
Federal Resources for Educational Excellence	Featured Site
Learn NC—University of North Carolina	Best of the Web
WGBH/NSF Teachers Domain	Best Earth and Space Science Resources
NASA Goddard Space Flight Center	Excellence in Outreach
Graphic Design USA	American Graphic Design
Washington Science Teachers Association	Higher Education Teacher of the Year
Aegis	Aegis Award
NASA Goddard Space Flight Center	Excellence in Outreach

Recipient	
Mission/Program	Activity/Person
Cassini	Ring World
Earth Observatory System	Earth Observatory Team
Earth Observing System Data and Information System	Jennifer Brennan
GAVRT-JPL	Frank Semerano
Hubble Space Telescope	Amazing Space
Hubble Space Telescope	Amazing Space
Hubble Space Telescope	Amazing Space
IMAGE	IMAGE
IMAGE	Sten Odenwald
Mars Public Engagement Program	Mars Public Engagement
NASA Sun-Earth Connection Education Forum	Ancient Observatories
NASA Sun-Earth Connection Education Forum	Sun-Earth Day–Ancient Observatories
NASA Sun-Earth Connection Education Forum	Sun-Earth Day–Venus Transit
Navigator Program	Navigator PlanetQuest Web Site
Navigator Program	Navigator PlanetQuest Web Site
Navigator Program	Navigator PlanetQuest Web Site
Navigator Program	Navigator PlanetQuest Web Site
Navigator Program	Navigator PlanetQuest Web Site
New Horizons	Teams Management Group/John Bristow
Research Opportunities in Space and Earth Sciences	StarDate
Space Science Network Northwest/Space Grant Consortium	Julie Lutz
Spitzer Space Telescope	Spitzer Space Telescope–Ask an Astronomer
STP/LWS EPO Program	Dr. Evelina Felicite-Maurice

APPENDIX G. NASA Education Leads

The Science Mission Directorate (SMD) Education and Public Outreach (E/PO) program products and activities described in this report are only one part of a broad, coordinated NASA Education Program that is led by the NASA Office of Education and spans all of the NASA Mission Directorates and Field Centers. The persons responsible for conducting education programs at each of these locations are listed below.

NASA HEADQUARTERS

Office of Education

Dr. Joyce Winterton
Associate Administrator for Education
NASA Headquarters
Office of Education
202-358-7097
joyce.l.winterton@nasa.gov
<http://education.nasa.gov/>

Aeronautics Research Mission Directorate (ARMD)

Mr. Anthony Springer
E/PO Lead ARMD
NASA Headquarters
ARMD
202-358-0848
tony.springer@nasa.gov
<http://www.aerospace.nasa.gov/education.htm>

Exploration Systems Mission Directorate (ESMD)

Ms. Patricia Currier
E/PO Lead ESMD
NASA Headquarters
ESMD
202-358-2334
patricia.a.currier@nasa.gov
<http://exploration.nasa.gov/>

Mr. Jerry Hartman
E/PO Lead ESMD
NASA Headquarters
ESMD
202-358-1451
jerry.g.hartman@nasa.gov
<http://exploration.nasa.gov/>

Space Operations Mission Directorate (SMOD)

Ms. Carla Rosenberg
E/PO Lead SOMD
NASA Headquarters
SOMD
202-358-1734
carla.b.rosenberg@nasa.gov
<http://www.hq.nasa.gov/osf/>

Science Mission Directorate (SMD)

Dr. Ming-Ying Wei
E/PO Lead SMD
NASA Headquarters
SMD
202-358-0771
Ming-Ying.Wei-1@nasa.gov
<http://science.hq.nasa.gov/>

NASA CENTERS

NASA Ames Research Center (ARC)

Mr. Donald James
 Director of Education
 NASA Ames Research Center
 650-604-4967
<http://www.nasa.gov/centers/ames/education/index.html>

NASA Dryden Flight Research Center (DFRC)

Dr. Miriam Rodon-Naveira
 Chief, Office of Academic Investments
 NASA Dryden Flight Research Center
 Mail Stop 2004
 661-276-3647
<http://www.dfrc.nasa.gov/Education/>

NASA Glenn Research Center (GRC)

Ms. Jo Ann Charleston
 Chief of Education
 NASA Glenn Research Center
 External Programs Directorate
 216-433-2857
<http://www.grc.nasa.gov/Doc/educatn.htm>

NASA Goddard Space Flight Center (GSFC)

Dr. Robert Gabrys
 Director of Education
 NASA Goddard Space Flight Center
 301-286-7205
<http://education.gsfc.nasa.gov/>

NASA Jet Propulsion Laboratory (JPL)

Dr. Parvin Kassaie
 Director of Education
 NASA Jet Propulsion Laboratory
 Mail Stop 180-109
 818-354-8814
<http://education.jpl.nasa.gov/>

NASA Johnson Space Center (JSC)

Ms. Susan White
 Director of Education
 NASA Johnson Space Center
 Office of External Relations
 281-483-7011
<http://education.jsc.nasa.gov/>

NASA Kennedy Space Center (KSC)

Dr. Gregg Buckingham
 Chief, Education Programs and University Research Division
 NASA Kennedy Space Center
 Mail Code XA-D
 321-867-8777
<http://www.nasa.gov/centers/kennedy/education/index.html>

NASA Langley Research Center (LaRC)

Mr. Roger Hathaway
Head of Education
NASA Langley Research Center
Communications and Education Office
757-864-3312
<http://edu.larc.nasa.gov/>

NASA Marshall Space Flight Center (MSFC)

Mr. Jim Ellis
Manager, Education Programs Department
NASA Marshall Space Flight Center
Mail Code HS30
256-961-7506
<http://education.msfc.nasa.gov/>

NASA Stennis Space Center (SSC)

Mr. Dewey Herring
Chief, Education and University Affairs
NASA Stennis Space Center
228-688-1329
<http://education.ssc.nasa.gov/>

NASA Wallops Flight Facility

Mr. Keith Koehler
Director of Education, Public Affairs Specialist
NASA Wallops Flight Facility
757-824-1579
<http://www.wff.nasa.gov/education/>

APPENDIX H. Geographical Index

This index lists by geographical location the institutions and organizations involved in the NASA Earth and space science Education and Public Outreach (E/PO) program during FY 2005. It includes institutions and organizations that contributed to leading the E/PO efforts of NASA Earth and space science missions or programs, carrying out E/PO activities, developing new E/PO products, serving as host sites for E/PO events or exhibits, and/or serving as the media outlet for E/PO materials or programs. The numbers in brackets refer to entries in appendix A or B in which the institution's or organization's participation is described.

Alabama

Auburn

Auburn University [A63, A472]

Birmingham

Birmingham Astronomical Society [A365]
 Birmingham Zoo [A365]
 Coosa Valley Christian School [A365]
 Lewis Elementary School [A365]
 Samford University [A385]

Brewton

Brewton Middle School [A275, A278]

Butler

Choctaw County High School [A309]

Decatur

Boeing Aerospace Corporation [A422]

Fort Payne

DeKalb County Library [A422]

Hobson City

C.E. Hannah Elementary School [A186]

Hoover

Final Frontier Astronomy Society [A365]

Huntsville

First United Methodist Church [A365]
 Girl Scouts of North Alabama [A109, A500]
 Holy Spirit Regional School [A109, A500]
 Huntsville Airport Sheraton Hotel [A385]
 International Space Camp [A472]
 Marriott Hotel [A392]
 National Space Science and Technology Center [A508]
 U.S. Space and Rocket Center [A51, A192, A309, A354, A385, A398, A422]
 University of Alabama at Huntsville [A4, A8, A17, A104, A504, A508]
 Von Braun Astronomical Society [A365]
 Wernher von Braun Planetarium [A109, A500]

Indian Springs

Indian Springs High School [A385]

Madison

Holiday Inn Select Hotel—Downtown [A385]

Marshall Space Flight Center

NASA Marshall Space Flight Center [A109, A228, A233, A240, A247, A327, A440, A464, A500, A508]

Mobile

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Listed below are the more than 100 NASA Earth and space science missions and programs that contributed to NASA Education and Public Outreach (E/PO) program activities in FY 2005. The missions and programs are listed alphabetically according to their full name. Some missions and programs have acronyms, which are inserted between parenthesis. Numbers in brackets refer to mission/program listings in appendix B.

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